MEDICAL RECORD

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—SIR WILLIAM OSLER

June 1945

Vol. 158, No. 6

AVERAGE MEASUREMENTS OF BOYS' AND GIRLS' HEIGHT IN INCHES

Age	Boys	Girls
Birth	20.2	19.9
3 months	24.1	23.7
6 months	26.4	26.0
12 months	29.5	29.0
18 months	31.9	31.4
2 years	33.9	33.4
3 years	37.3	36.7
4 years	40.2	39.6
5 years	42.7	42.2
6 years	45.0	44.6
7 years	47.2	46.8
8 years	49.2	48.9
9 years	51.2	50.9
10 years	53.2	53.0
11 years	55.2	55.3
12 years	57.1	57.6
13 years	58.9	59.7
14 years	60.7	61.4
15 years	62.4	62.5
16 years	64.0	63.2
17 years	65.4	63.7
18 years	66.6	64.0
19 years	67.5	64.0
20 years	68.0	64.0

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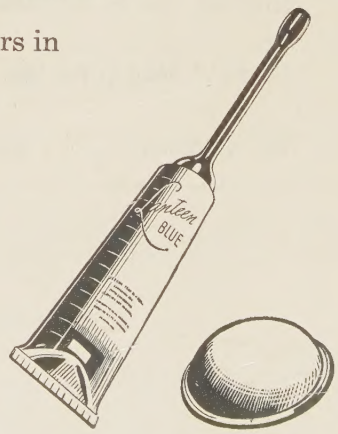

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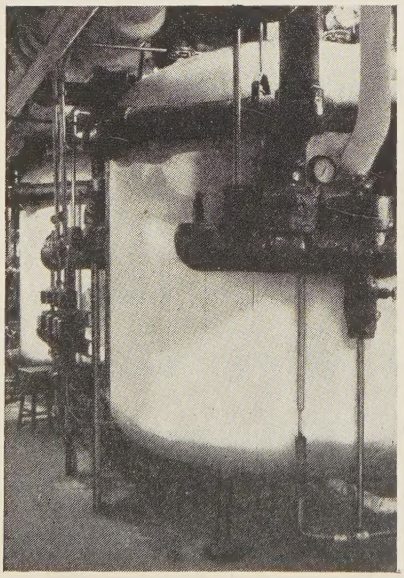

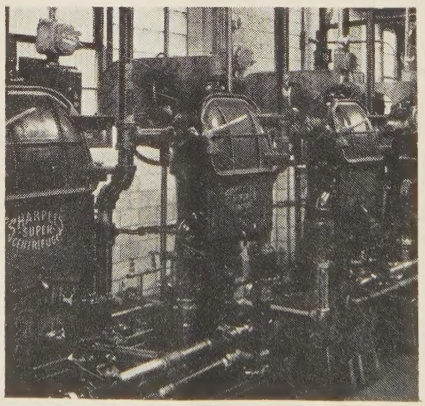

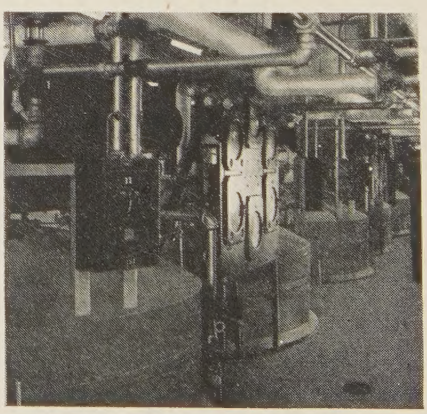

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Leprosy and Its Treatment

On this continent there is some leprosy and W. L. Aycock, in an article entitled Familial Susceptibility as a Factor in the Propagation of Leprosy in North America (*Internat. Jour. Leprosy,* April-June 1940) points out that leprosy tends to recur in certain family lines in which intermarriage is common. From his studies and the studies of others, it appears that hereditary susceptibility is a major factor in the propagation of the disease on the North American Continent.

G. Muir, an authority on the treatment of leprosy, writes in the *Leprosy Review* (October 1940) on some basic principles in leprosy treatment. He emphasizes that the general health of the patient profoundly affects his resistance to the disease. Potassium iodide has a specific effect in breaking down the defense mechanism of the bacilli. Massive treatment with dyes is not recommended, and smaller doses do not seem to have a curative effect, while doses large enough to cause evacuation of leproma are apt to prove extremely dangerous. Dyes given in small doses over a short period to control lepra reaction are safe and of value.

D. R. Collier, in an article on the use of diphtheria toxoid in the treatment of leprosy (*Internat. Jour. Leprosy,* January-March 1941) suggests that the cause of the beneficial results from this form of treatment may be due to some antigenic factor common to both the diphtheria and leprosy bacillus.

Kuznezov has tried the naphthalan oil bath and records his experience with this line of treatment in *Internat. Jour. Leprosy* (Jan.-March 1941). This oil belongs to the type of heavy oils which contain no petroleum, benzine or paraffin. It sticks very firmly to the skin and cannot be washed off by water, but dissolves readily in chloroform, ether or benzene. The patient in question was immersed up to the breast in a bath and the remainder of the body was coated with oil. He was kept in the bath for fifteen minutes and then the oil was removed by a piece of wood. He then lay on a bench in the sun for fifteen minutes, after which he stayed in bed for three or four hours. He perspired profusely. Fourteen cases were thus treated and in almost all instances, successfully.

Muir, in the article referred to draws attention to the intranasal treatment of leprosy and stresses the point that due attention to the nose largely diminishes the danger of the discharge of the lepræ and the spread of infection. With this end in view, three objects should be kept in mind: prevention of sepsis, removal of sepsis, if it has occurred, and the cleaning up of leproma. Lavage by nasal saline is recommended. If cases are highly septic, ten percent sodium sulphate solution may be substituted with cauterization for local treatment.

The London correspondent of the *J.A.M.A.* (April 21, 1945) gives a preliminary account of the discovery in Madagascar of a new remedy, which has given remarkable results in the treatment of advanced lepromatous cases of leprosy. In 1937 two French physicians, Drs. Boiteau and Grimes, extracted a new glucoside from an umbelliferous plant growing in Madagascar which gave encouraging results in leprosy. In 1938 Bontemps discovered a new glucoside, which was much less toxic. By further research Boiteau obtained a solution suitable for injection. The results now reported from the new glucoside include softening and breaking down of nodules, followed by cicatrization.

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Open Forum

Health Makes Wealth for the Americas

MAJOR GENERAL GEORGE C. DUNHAM
Assistant Coordinator of Inter-American Affairs
Washington, D.C.

It is an old saying that health makes wealth. The basic wealth of a nation is its people. The labor of a healthy, vigorous people transforms the resources of soil, mine and forest into the wealth of agriculture and industry. Out of a combination of vigorous, pioneering people and varied natural resources the Americas have accumulated riches and have achieved in this war the greatest production by agriculture and industry the world has seen.

These productive feats have been aided by improvement in Western Hemisphere health and sanitation standards, as well as by improvements in machinery and in the technique of farm, factory and mine. Wartime "wonder" developments in machines and industry have their counterparts in the advances of medicine and sanitation, too. Penicillin, sulfa drugs, new insecticides, blood banks are examples of the march of medical science. These life-giving advances of medicine contribute to victory on the economic front, as on the fighting front. After the war they will continue to pay large dividends to mankind in the way of life, health and higher living standards.

Wartime Achievements in Health and Sanitation

Some of the recent advances in health and sanitation work are more remote from the public eye than "miracle" drugs which capture the news headlines. Nonetheless, the achievements of health and sanitation work off the main routes of headline appeal are significant. One of the most significant of these wartime achievements is the growth of inter-American cooperation toward the objective of building and elevating health and sanitation standards in the Western Hemisphere. As a model for international cooperation in combating disease, the pattern of collaboration worked out by the Americas holds hope for the future.

Disease Control

In this cooperative work, the Americas have recognized that there is little room for argument on the question whether disease control is an international problem. Certainly as far as the Americas are concerned, isolationism in disease control is a settled issue. That issue was settled many years ago in the organization of the Pan American Sanitary Bureau as an inter-American agency for fighting disease and improving hemisphere sanitation. Now the principle of inter-American cooperation in health and sanitation is being carried out on a larger scale. Nineteen of the American Republics, including the United States, are working together in health and sanitation projects which have evolved out of the necessities of wartime. Under recent agreements between most of the other Americas and the United States, the work will continue for two or three years more, at least, with the Latin American countries increasing their shares of the financing and providing an increasing proportion of the professional and technical personnel.

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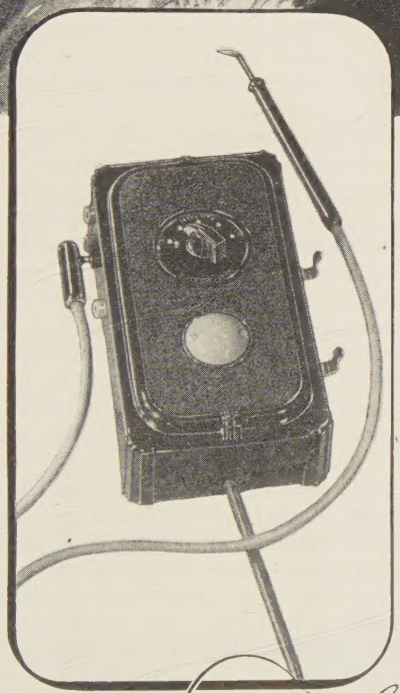

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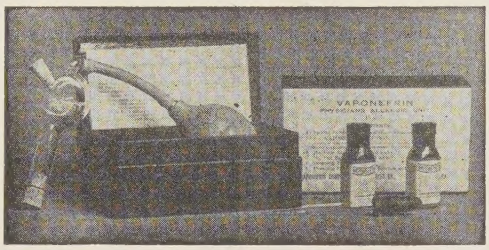

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Economic Development

Brazil, for instance, has underwritten $5,000,000 and the United States $3,000,000 of a joint five-year program of health and sanitation work to aid the economic development of the Amazon and the Rio Doce valleys. The development of these areas is important to the continued prosecution of the war effort. The two valleys are sources of urgently needed strategic materials, including rubber, vegetable oils and minerals. Moreover, they are vast areas of potential economic development for long-range expansion of hemisphere production and trade. The economic development of these areas with the aid of modern health and sanitation measures illustrates the significance of the growth of inter-American cooperation in disease control. In Brazil, health work literally is helping to make wealth for the Americas. The story is the same with cooperative health and sanitation work going on in Central America, Caribbean island republics, Peru, Ecuador, Bolivia, Paraguay, Chile and other countries.

Throughout Latin America the second World War has given impetus to economic development, to the expansion of local industries, mining and tropical agriculture. This development in substantial part has been undertaken to provide new or additional sources of essential materials for United Nations war industry. At the same time, it is the continuation of a development trend which has been moving forward for many years. With some readjustments when war production is curtailed, the development trend seems likely to continue, and to be accelerated in various lines, after the war. What holds particular promise in the future development of their natural wealth is the will toward and experience in cooperative effort achieved by the Western Hemisphere countries.

Inter-American cooperation—now a highly developed system of principles and operating mechanisms—in itself is eloquent testimony that no nation can lift itself up the ladder of economic development and living standards by its own bootstraps. That truth, too, is implicit in international trade. In an urgent way, that elemental economic fact has been brought home to the Americas by the second World War. First the war removed from the reach of this hemisphere substantial markets and sources of supplies in Europe. Then the spread of the war to the Pacific cut off large sources of raw materials, such as rubber and fibers. The resulting increased development of hemisphere production and trade to offset these losses turned the spotlight on the mutual interdependence of the Western Hemisphere countries. Probably it is no exaggeration to say that inter-American trade and hemisphere production in these war years have undergone the greatest expansion in history for a comparably brief period. The momentum of the trend, together with the fruits of experience in inter-American cooperation, doubtless will carry forward after victory on the battlefronts permits the Americas to concentrate again on the long-range tasks of raising civilian living standards. And in economic development tasks, health and sanitation work now has a firmly established place. The best evidence of this is the recent series of agreements between the United States and the other American republics extending health and sanitation programs begun in the grim crisis following Pearl Harbor.

It was in that crisis after Pearl Harbor that the American republics enlarged the framework of inter-

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American cooperation to strengthen hemisphere defenses and expand hemisphere production of essential war materials. This was done at the Rio de Janeiro Conference of American Foreign Ministers, in January, 1942. With an Axis pincers threat aimed at Latin America by way of Africa and the Pacific, the Rio de Janeiro meeting drew a pattern of cooperative activities which since has made history in contributing to victory of the United Nations. And tucked away in resolutions calling for action in economic development and improvement of hemisphere defenses was a recommendation for health and sanitation measures to support the joint war effort.

Such was the genesis of the largest health and sanitation program yet undertaken on a cooperative basis among independent nations. The specific reasons for placing the work on a cooperative basis were manifold. First, it was recognized that war would bring a great movement of defense forces, workers and others throughout the hemisphere. This increased the menace of the spread of contagious and insect-borne disease, such as malaria. Then it was understood that the strengthening of hemisphere defenses would mean the building of additional air, naval and military bases in areas which required health and sanitation work. Furthermore, it was understood that the development of hemisphere production of war materials largely would be centered in areas off the main lines of urban health improvements, such as the Amazon and Rio Doce valleys in Brazil, mining camps of Bolivia, fiber plantations of Central America and Haiti.

In defense and development work of the scope called for in the Rio resolutions, the vanguard had to include the doctor and the sanitary engineer. They were needed to prepare the way for soldiers, sailors, airmen, miners, rubber, and fiber collectors. Hence health and sanitation measures were among the first to go into action as recommendations of the Rio conference were expressed in tangible projects. With $25,000,000 transferred from President Roosevelt's emergency fund, supplemented later by appropriations from Congress, the Office of the Coordinator of Inter-American Affairs soon after the Rio meeting launched the health work and sent the first mission of doctors and engineers to Ecuador to start what since has become a program of continental dimensions.

Inter-American Cooperative Health Service

The principles of cooperation behind this continental program had evolved with the inter-American system, from its earliest beginnings in the minds of such men as Simon Bolivar through Pan American conferences and special meetings, leading to the specific recommendations of the Rio conference. It was necessary, however, to enlarge the machinery of cooperation for the health and sanitation measures. Out of the special needs of the work came a new mechanism—the Inter-American Cooperative Health Service. The special services, with some variation in operating arrangements and names, were organized as integral parts of the national governments to provide channels of cooperation with the United States. For the United States, the Coordinator's Office set up a corporate entity known as the Institute of Inter-American Affairs. This corporate entity facilitated the operations outside the United States and the handling of funds.

To the eighteen Latin American countries participating in the program, the Institute of Inter-American

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Affairs assigned some two hundred and twenty United States citizens, including twenty-eight physicians, fifty-eight engineers and twenty-six nurses. These mainly were specialists. The overwhelming proportion of the personnel consists of nationals of the other American republics. A recent summary, for instance, showed nearly twelve thousand at work in the continental program, including 269 physicians of the other Americas, 150 engineers, 108 registered nurses and nearly fifteen hundred other technical and clerical personnel. In addition, nationals of the other Americas included many practical nurses and sanitary inspectors.

Doctors, engineers and other trained personnel were selected with knowledge of the great variety of local conditions in the hemisphere and special health and sanitation problems encountered in various places. Moreover, production of strategic materials and defense projects raised peculiar disease control and sanitation problems. To handle these, cooperative arrangements were worked out with fiber growers in Haiti, the Rubber Development Corporation and the Foreign Economic Administration. In collaboration with the Brazilian government and FEA, for instance, special medical service was made available to mica miners in the Rio Doce Valley. Similarly, special projects and services were provided for workers engaged in the collection and handling of rubber, in the construction of strategic highways, mining in Bolivia, building of airports, naval bases and other hemisphere defenses.

The variety and scope of the work is indicated by a recent summary showing more than seven hundred activities under way or completed. These included some three hundred projects for environmental improvement through permanent mosquito control measures, water supplies, sewerage systems and general sanitation. Included in the construction work were one hundred forty health centers, hospitals, infirmaries, dispensaries and other buildings. More than two hundred activities embraced provision of medical care and preventive services through the operation of hospitals, health centers, clinics and laboratories; surveys and research in disease control, and training courses in health education.

From malaria control posts in the Amazon forests to hospitals and health centers in crowded urban districts, the projects are designed to yield maximum benefit for wartime needs and to aid long-range hemisphere development. Chile, for example, has been undergoing considerable industrial expansion, centering in the capital city, Santiago. Diversification of production is one of Chile's aims to avoid economic difficulties in the event of sudden cessation of war demands for copper and nitrates, her chief exports. Chile, consequently, is pressing for greater industrialization. Santiago is a growing industrial area. And among the cooperative health and sanitation projects in Chile is a modern health center in a worker's residential district in Santiago.

Health Work in Hemisphere Economic Development

At many other points the inter-American health program touches hemisphere development. Wartime and long-range development of hemisphere resources are so closely entwined it is not possible to draw a sharp line of demarcation. Airports, highways and similar works built primarily for urgent war needs will remain

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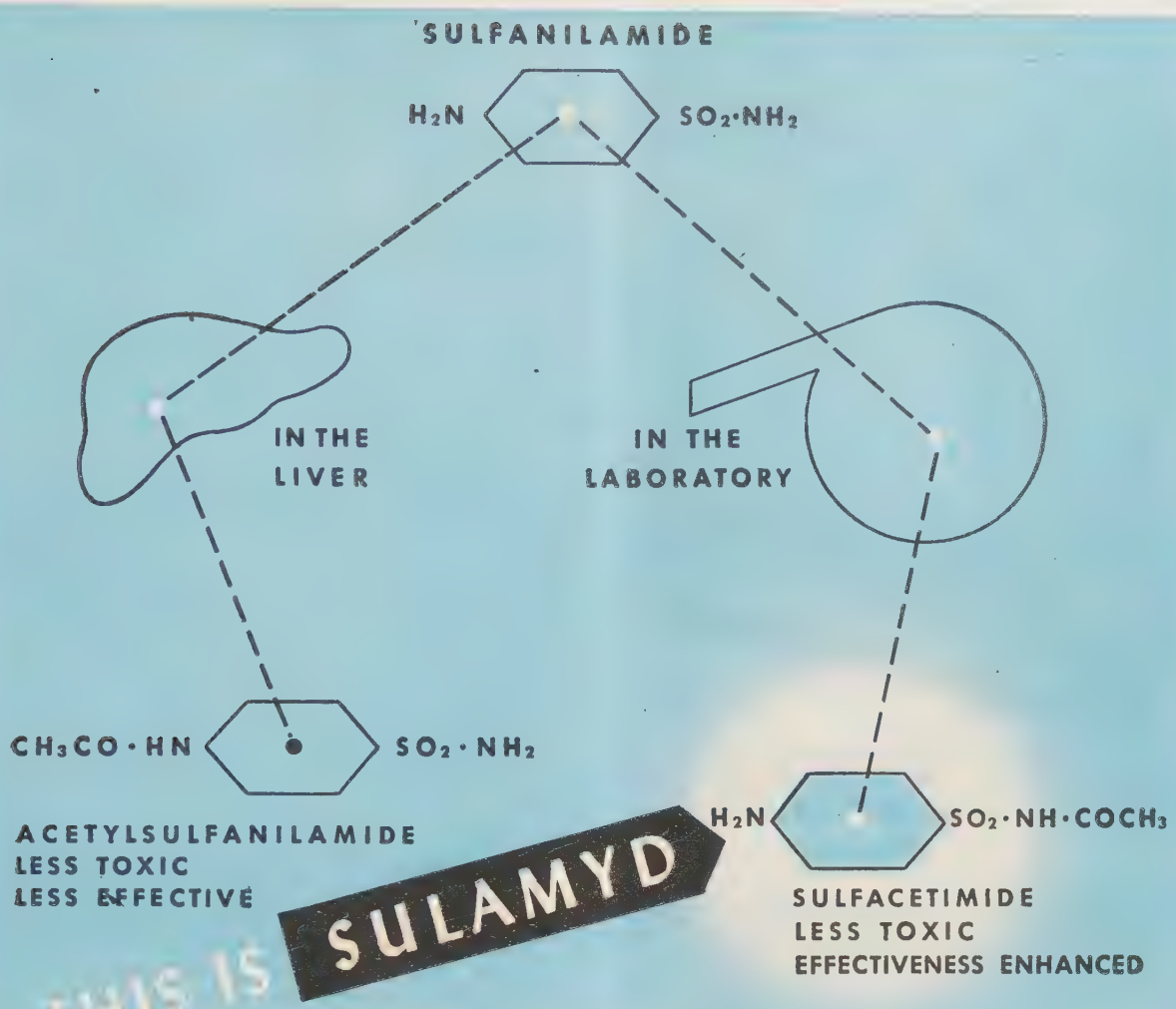

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PRESCRIPTION PRODUCTS

after the war to aid longer-range developments. Mining, tropical agriculture, manufacturing and other fields of hemisphere economic growth likewise have been stimulated. The health work, as part of this war-time activity, cannot be distinguished sharply between projects useful only for war and projects useful for longer-range expansion of hemisphere production and trade. As illustration of the rôle of the health work in hemisphere economic development, the following additional specific examples are cited:

Peru.—The Peruvian government is building highways across the Andes, encouraging colonization and agricultural projects to develop a large territory in the upper Amazon basin. The upper Amazon is one of the remaining frontiers for development in the Western Hemisphere. During the war, it has become of increasing importance as a source of rotenone, rubber and other tropical products. The chief economic returns from this area, however, will come with further improvement of communications and colonization. Most of the cooperative health and sanitation projects in Peru are in this trans-Andean territory. Health centers, hospitals and other medical facilities are being provided to aid colonization and agricultural development.

(To be continued)

Exhibit of Army Medical War Paintings

The première exhibit of more than two hundred and fifty oil paintings, water colors and sketches depicting the war rôle of Army doctors, nurses and enlisted men of the Army Medical Department, was held in the Corcoran Galleries, Washington, D.C., on Sunday, May 13th. The pictures are the work of several of the country's foremost artists who make up the Army Medical Department War Art Project, which was authorized by the War Department two years ago and launched at the same time by the Surgeon General's Office. Many of the artists who worked on the project under the direction of the Associated American Artists, in New York, were sent to American battlefronts in the South Pacific, Europe and the Mediterranean. Others confined their activities to training centers in the United States and to the Zone of Interior hospitals. Connoisseurs are unanimous in their praise from the point of view of art, and in the opinion of many the paintings are the finest that have come out of the war. High-ranking Army officials have testified to the authenticity of the collection from a military viewpoint.

The idea for a collection of Army Medical Department war paintings was first suggested in September, 1942, by Lt. Col. Howard Baer, executive officer of the Army Medical Purchasing Office, New York branch of the Surgeon General's Office. Approval of the undertaking was obtained from Surgeon General Kirk, and the office of the Secretary of War, and Colonel Baer was charged with the duty of carrying out the plan.

The project was sponsored by Abbott Laboratories and the canvasses are known as the Abbott Collection of Paintings of Army Medicine. They will be donated to the War Department. The entire collection will be exhibited in several large cities following the Corcoran Galleries opening. Although the exhibiting itinerary has not been completed, the collection will move from Washington to St. Louis in June. Other cities in which the pictures are scheduled for exhibition include New York, Seattle, Chicago, Cleveland, San Francisco and New Orleans.

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COMPOUND

BOTTLES OF 100 AND 500

Also 'Tabloid' 'Empirin' Compound with Codeine Phosphate, gr. ⅛, gr. ¼ and gr. ½.

The Conquest of Tuberculosis

For more than four decades the mortality from tuberculosis in the United States has been declining without interruption, says the *Statistical Bulletin* of the Metropolitan Life Insurance Company (April 1945), with the result that the current death rate from the disease is only about one fifth of what it was at the beginning of the century. The improvement, moreover, has been fairly consistent throughout the prosperity of the twenties, the depression of the thirties, and the exacting years of the present war. From 1921 through 1943 the death rate decreased on an average by four percent annually.

On the assumption that the decline will continue at the same rate as in the period from 1921 to 1943, a death rate may be expected of about 30 per 100,000 in 1950 and of about 20 per 100,000 in 1960. It is pointed out that there is good reason to believe the actual figures will be even lower than those indicated by the forecasts. How soon tuberculosis is reduced to vanishing proportions depends to a large extent on the vigor with which the full means of combating the disease are utilized.

Important steps in this direction are the establishment of the Tuberculosis Control Division in the United States Public Health Service, and the medical care provided for war veterans. The campaign against tuberculosis will benefit not only from various direct measures, but also general measures which will bring about a higher standard of living. The cumulative effect of these measures and of other steps should be to build up strong bodies resistant to disease.

"Considering the new elements introduced into the present-day fight against tuberculosis, it is not unduly optimistic to expect that the death rate from the disease may fall below the levels indicated by the recent trend. The final conquest of tuberculosis should be one of the first items on the agenda in planning for the postwar health and welfare of the American people."

Goldwater Bibliography

The Bacon Library of the American Hospital Association has compiled a bibliography of the published writings of the late S. S. Goldwater, M.D. Dr. Goldwater, who died October 22, 1942, was an outstanding hospital administrator and a leader in the progress of medicine. Although serving New York City as Commissioner of Health and later as Commissioner of Hospitals, the greater part of his professional life was spent as administrator of Mt. Sinai Hospital in New York City. At the time of his death, he was president of the Associate Hospital Service of New York City.

As a past president, and as a member of councils and committees of the American Hospital Association, he contributed an immeasurable amount to the art and science of hospital administration. Dr. Goldwater was recognized by an honorary membership in the American Institute of Architects because of his interest and ability in the planning of hospitals.

He wrote authoritatively on many subjects in the hospital and medical field and the bibliography is of use to those interested in studying the development of hospitals as seen by Dr. Goldwater. Copies may be had without cost from the Bacon Library.

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may be used whenever a potent sedative is needed, with every assurance that it will meet fully the demands made upon it.

Especially when a sedative must be continued over long periods will PASADYNE demonstrate its unusual therapeutic power as well as freedom from evil effects.

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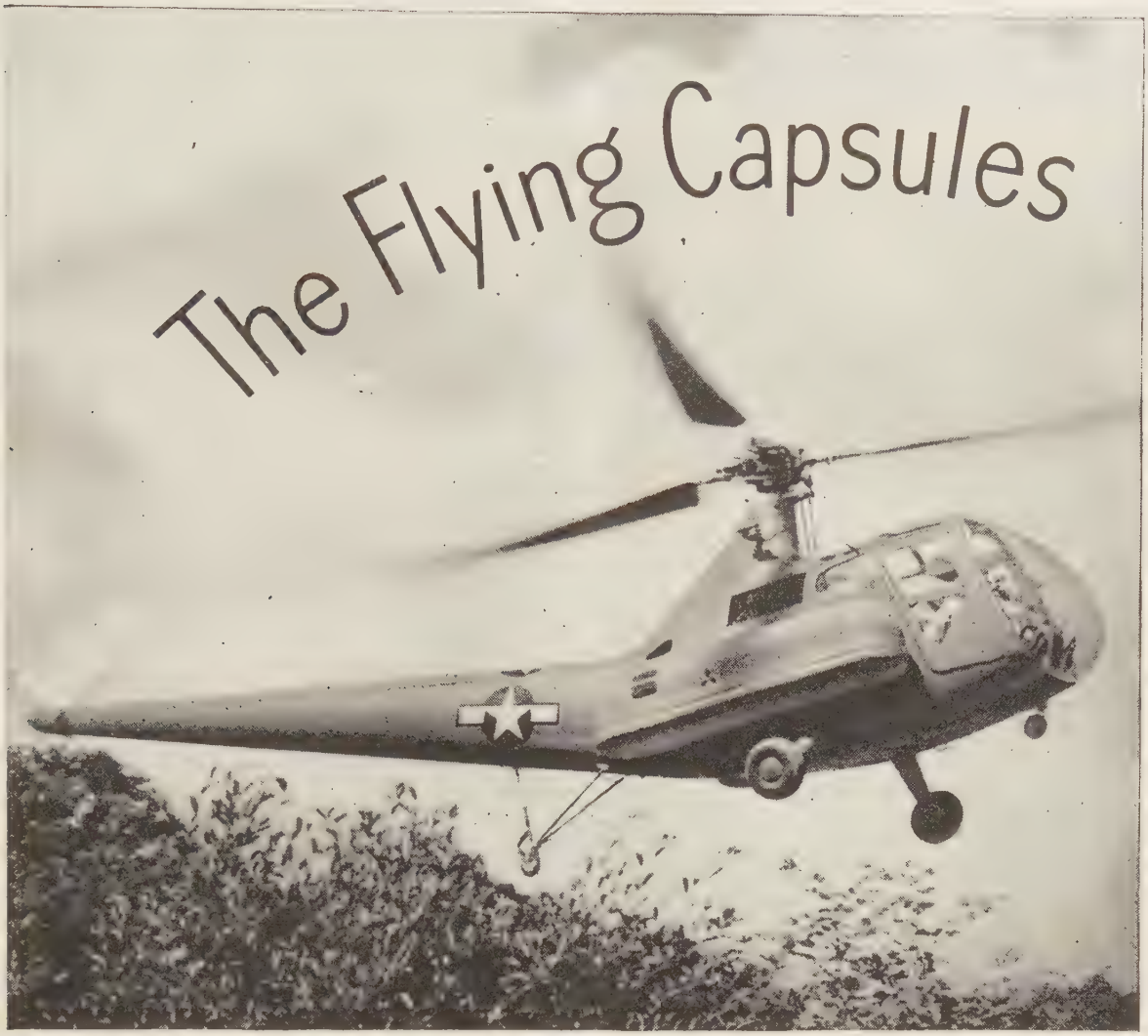

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In this stepped-up tempo of war, however, the Army doctor finds little "time out" for himself. When there is a "break" in his long hours, his relaxation may be limited to a few pleasant moments with a cigarette . . . very likely a Camel, for Camels are such a big favorite with men in all the services.

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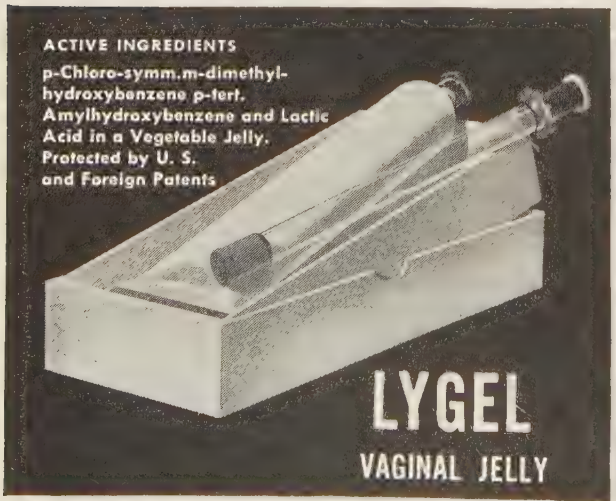
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Hodgkin's Disease Clinic

A Hodgkin's Disease Clinic and Research Laboratory under the direction of Dr. A. Rottino, has been established at St. Vincent's Hospital, Seventh Avenue at Eleventh Street, New York City. The Clinic and Laboratory will collaborate with Dr. Herman Hoster, of the Ohio State University, Columbus, Ohio, with Dr. Robert Chambers, and C. G. Grand of New York University, (International Cancer Research Foundation, Philadelphia, Pa.), Dr. Kurt Stern, of the Brooklyn Polytechnic Institution and with Major Perk L. Davis, M.S., of Walter Reed General Hospital, Washington, D.C., in studying the etiology and treatment of Hodgkin's disease (lymphogranuloma). The preliminary work on etiology has already been done by C. G. Grand, who by tissue culture methods has demonstrated cell inclusion bodies in lymphoid tissues, removed from patients with Hodgkin's disease. These workers have at the combined disposal of their laboratories all the essential equipment and techniques for the solution of a problem of this type. The focussing of a large number of widely-differing research techniques upon this problem is unprecedented.

Inasmuch as cases of Hodgkin's disease are comparatively rare and because fresh, unfixed tissue is essential for the studies, the clinic requests patients, referred by physicians. It is therefore asked that physicians reached by this notice send cases of unexplained lymph node enlargements to Dr. Rottino and his group, at St. Vincent's Hospital. It is understood that any patient referred for such study, unless requesting private attention, will not be charged for medical or surgical service. A report of the results of each study will be sent to the referring physician. Patients whose disease proves to be other than Hodgkin's disease, will be retained in the clinic for follow-up care and treatment, with the permission of the referring physician.

Physical Therapists Urgently Needed

Major General Norman T. Kirk, Surgeon General of the Army, and Vice-Admiral Ross T. McIntire, Surgeon General of the Navy, state that the return of wounded men from many fronts has intensified the need for physical therapists and they urge young men and women throughout the nation to avail themselves of the scholarships offered by The National Foundation for Infantile Paralysis which has appropriated $1,267,600 for a physical therapy program.

General Kirk said that the rehabilitation of the wounded, in which physical therapy is of increasing importance, would continue long after the war was over and that the expansion of the scope of physical therapy to "new fields of usefulness" would increase the postwar need for trained personnel. The immediate need in the armed forces was so urgent, he said, that the Army was also conducting its own training courses in Army general hospitals.

Admiral McIntire reported that Navy and Marine Corps medical officers had come to consider property applied physical therapy as much a part of the treatment of the war wounded as "good surgery". He declared that postwar physical therapy would not only help repair the human damage of the war but also help to overcome the casualties of everyday peacetime life.

Applications for scholarships are being accepted at the National Foundation's offices, 120 Broadway, New York 5, N.Y.

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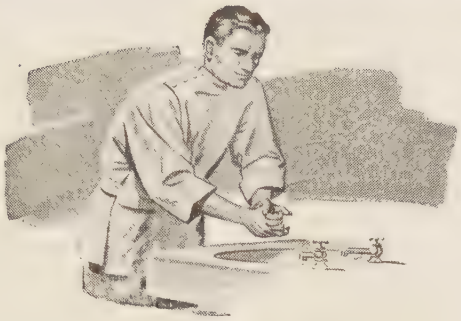

Frequent washing may leave your hands red and rough . . . etch tiny fissures where harmful organisms can gain entrance.

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Tenth Anniversary of Associated Hospital Service

How the Associated Hospital Service of New York has contributed to the nation's health by helping to preserve the voluntary system of hospitalization and the private practice of medicine was stressed by speakers at a testimonial meeting held on May 7th in the Einhorn Auditorium of the Lenox Hill Hospital to commemorate the tenth anniversary of New York's Blue Cross Plan. The principal speakers were Dr. William B. Rawls, chairman of the Coordinating Council of the Five County Medical Societies of Greater New York; Dr. Morris Hinenburg, president of the Greater New York Hospital Association; Louis H. Pink and Frank Van Dyk, president and vice-president, respectively, of Associated Hospital Service of New York, and Roy E. Larsen, president of United Hospital Fund. John Hayes, superintendent of Lenox Hill Hospital, presided.

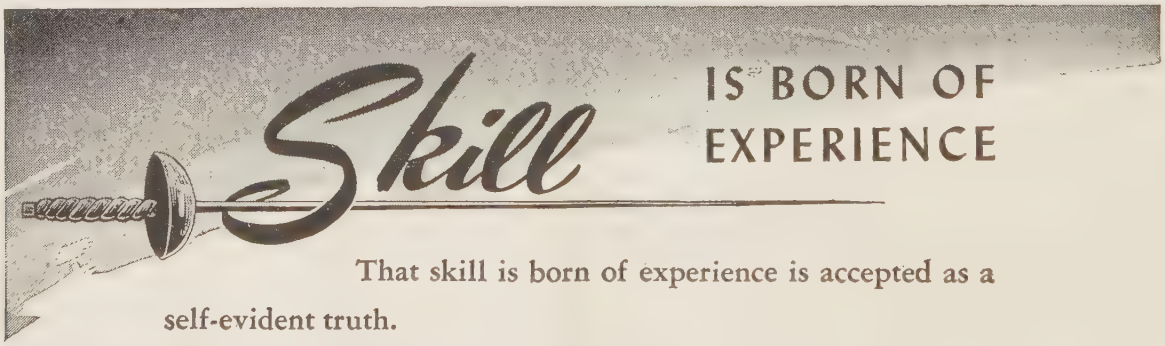
A testimonial scroll, presented to Mr. Pink by Dr. Hinenburg, in behalf of the New York voluntary hospitals, paid tribute to the Associated Hospital Service of New York for its "splendid cooperative relationships with the hospitals for the betterment of hospital care for the residents of our great city."

Dr. Rawls lauded the Associated Hospital Service of New York for its rôle in preserving the voluntary system of health protection through the operation of the hospitalization plan and its cooperation with "the doctors' plan" of United Medical Service, Inc.

Dr. Hinenburg stressed the need for the coordination of voluntary hospitals, Blue Cross Plans and medical service plans with government programs for medical care to achieve an adequate health program under the nation's present voluntary system. He expressed the hope that New York's Blue Cross Plan, along with the nation's other Blue Cross Plans, would expand its service to include individuals in the lower income brackets and provide for as many kinds of illness as possible and for longer periods of hospitalization.

Health Conditions in New York State

In a review of health conditions in the State of New York, *Health News* states that during the first quarter of this year the number of deaths was two thousand less than in the same period in 1944, and with but few exceptions the mortality from most of the important diseases was favorable. The maternal mortality rate of sixteen per 1,000 population was one-half of that recorded only five years ago. The tuberculosis death rate, which increased during the first quarter of 1944, registered a drop of five percent during the corresponding period this year. The upward trend in the diabetes mortality was halted, with an eight percent reduction from the 1944 figure, and there were fewer deaths than in the immediately preceding years from diseases of the heart, blood vessels, and kidneys, and the mortality rates of influenza and pneumonia have never been lower. The mortality from cerebrospinal meningitis, which commenced to rise in the spring of 1942 and was unusually high during 1943 and 1944, showed a gratifying decrease during the first quarter of 1945, when deaths in the entire State numbered 69 as compared with 145 in 1944. In the month of March the death rate was 11.4 per 1,000 population, which is the lowest ever recorded for that month.



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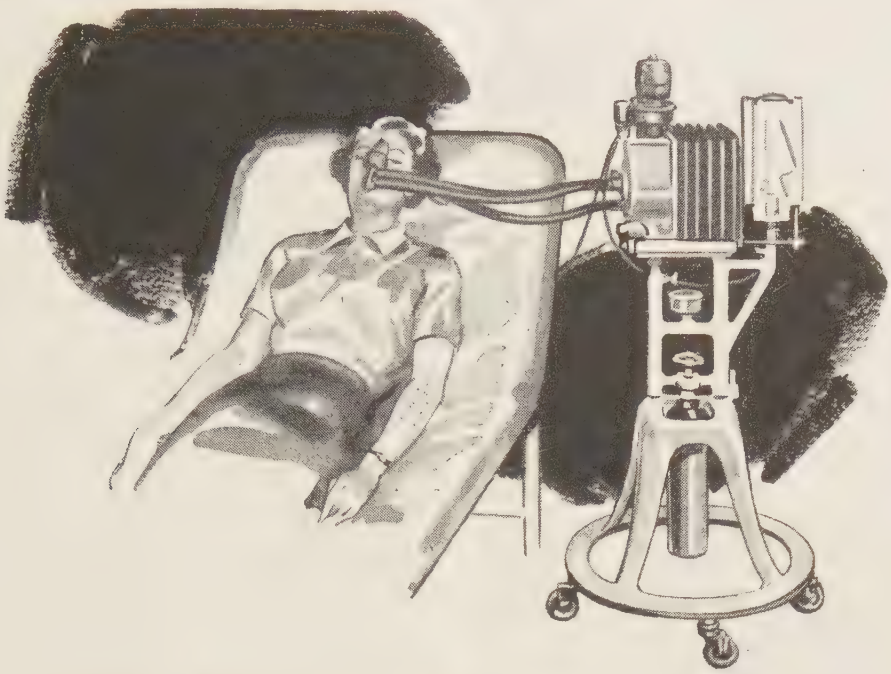

In Hyperthyreosis, too

The symptom complex of increased appetite, exaggerated psychomotor tension, hyperhidrosis, and loss of weight, in addition to spelling thyrotoxicosis, also reflects the intense metabolic activity characteristic of this condition. Utilization of nutrients may be 50 per cent above normal.

Whether therapy be conservative or surgical, metabolic deficits must be eradicated and some of the consumed body tissue restored. To this end the intake of virtually all essential nutrients must be doubled. If surgery is contemplated, nutritional preparation ranks in importance with iodine preparation for a successful outcome.

Ovaltine can be a valuable component of the high-caloric, high-vitamin diet required in hyperthyreosis. This delicious food drink, made with milk, not only increases the caloric intake appreciably, but also significantly augments the intake of complete proteins and of vitamins and minerals, all of which are required in added amounts.

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PHOSPHORUS	.903 Gm.	NIACIN	7.0 mg.
IRON	11.94 mg.	COPPER	.5 mg.

*Based on average reported values for milk.

AMONG MY BOOKS—AGAIN

THE HONOURABLE WILLIAM RENWICK RIDDELL
Toronto, Canada

(*Continued fom page 278*)

A Physical Dictionary, in which all the Terms relating either to Anatomy, Chirurgery, Pharmacy or Chymistry are very accurately explained. By Stephen Blancard, M.D. and Physick-Professor at Middleburgh in Zealand. London.

The Physical Dictionary, wherein the Terms of Anatomy, the Names and Causes of Diseases, Chyrurgical Instruments, and their use are accurately described. Also the Names and Virtues of Medical Plants, Minerals, Stones, Gums, Salts, Earths, etc. And the Method of chusing the best drugs; the Terms of Chymistry, and of the Apothecaries' Art; and the various forms of Medicines, and the ways of Compounding them. By Stephen Blancard, M.D., physick-professor at Middleburgh in Zealand. The fifth edition. London, 1708.

These are two editions of a formerly well known and much valued work by an eminent physician. Stephen Blancard was the son of Nicholas Blancard (or Blanckaert), a professor of Greek, and a classical editor of considerable merit. The son was an untiring and voluminous compiler of books on medicine and surgery, taking everything he wished from all other authors, good or bad. He was of the Chemical School, as were most of the Hollander physicians of his time. He considered thickening of the "humors" the root of all disease, and recommended his patients to drink great quantities of tea to liquify them; he also recommended the removal surgically of cataracts. While he wrote an *Anatomia Practica Rationalis* (1688) which had much vogue, he is best known by his *Lexicon Medicum Graeco-Latinum* of which these volumes are a translation, somewhat improved; it was a favorite book, until it was displaced by Quincey's work. (It may be said that he is often referred to under the name of "Stephan Blankaart", as, for example, in Bass's *History of Medicine*).

The second of these editions being by far the more comprehensive, I shall give some account of it, leaving the former without comment. The contents are well described in the title. The Terms of Anatomy do not substantially differ from those in use at the present time; the names and causes of the diseases, however, do not as a rule, at all accord with ours. Few, if any, of us have heard of a Loripes (a varus or "crooked legg'd man", as he is described); a Dento (one with projecting teeth); or a Nefrens (with none). Appendicitis was unknown, perityphlitis even had not made its appearance, but they had the Iliac Passion or Dolor Iliacus, Miserere Mei, Volvulus, Tormentum, Chordapsus—John Wesley treated it by the topical application of live kittens. The trachea was still the arteria aspera; diabetes was aegineta dipsacus "from the great thirst that attends it, from a certain sort of serpent found especially in Libya which poisons by its bite and brings unquenchable thirst upon the person affected"; or it was *matulam inter cutem* (readers of Catullus will not need a translation) or *urinæ profluvium et siphonem*, so rare that Galen never saw more than two cases of it.

The four humors, blood, rheum, yellow bile and black bile, still held their own, as the root of practically all disease by reason of the improper mixture, the intemperies or dyscrasia, distemper—so, too, the three spirits, the natural spirit, formed in the liver, transmitted to the heart thence to be transmuted into Vital Spirit, thence to the brain to become Animal Spirit and sent through the system by the cerebellum and the nerves.

No credit, however, was given to hoplochrisma "when they bind up and dress a sword, knife or dagger, by which they purpose to heal the wound given by it; but this is very ridiculous". Sir Kenelm Digby's sympathetic powder receives as little consideration.

The "Medicus, the Physician" was then, as now, "a man highly skillful in the art of physick, modest, sober, and courteous . . . learned, honest, mild, diligent, a fortunate man . . . not arrogant with his knowledge, labour or success, not covetous . . ." No one can fail to appreciate the correctness of the definition. Moreover, the physician of those times knew much we have forgotten. He knew that "Epidemics . . . were caused by the Nitre in the Air with the other Particles that are in it" acquiring "the Vertue of an *Arsenick* or a *Sublimate* . . . taken together, they are a deadly Poison". Also that it was too much sugar that caused the increase in England of scurvy and consumption. If my physicians had only known what this author and his editor knew, namely, that the waters of Tunbridge Wells cured "hickup", they would not have left me, twelve days and twelve nights, the victim of singultus.

Then there was the chirurgus, "one skillful in the Art of Chirurgery, who performs his cures upon humane bodies by Manual Operations". He carried a Decussorium to press the *dura mater* so that the Chirurgeon could with his trepanum evacuate the "pus or snooty matter gathered between the scull and the skin". He also had a Glossocomium "for broken limbs"; a Remora specially for broken thighs; a Hamulus "to extract a dead child or mole"; a Piestrum, to break the bones of the child's skull; a Hypoleptrion, a Cataphractus, a ligature for the breast, and many other instruments. The actual cautery was still in use, and a fracture of a bone was called a Catagma.

Many things we have forgotten—or is "outgrown" the right word?—gynæcomstax, gynæcomastum, hidrotica, hidronosis, micleta (strytic), polycreston (a cure-all), pompholigodes (a condition of the urine with bubbles "frequent if the body be puft up or pained"), psyderacia, even hedysma, "anything that gives medicine a good scent". We do not in these days use mummy, and if we do use pachuntica, we give them another name. We have, indeed, learned that there are more metals than "are comprehended in this verse: Sol, Mars, Luna, Venus, Saturnum, Jupiter, Hermes"; and most of us have a hypophallum. Some of us wonder at "the learned Bartholine observing something like a prostate in women"; and some cannot be got to believe that hemiplegia is due to the animal spirit being obstructed in its passing—but, Quien sabe?

The description given of the plants are in general excellent, sometimes are added the supposed properties. The Pedicularis, the yellow rattle cocks comb . . . "makes cattle that eat it very lousy"; the Adianthum, our maiden hair fern, "removes the tartareous and viscous mucilage in the lungs, and therefore is good for coughs and short breaths, pain in the sides, kidneys or bladder"; Fraxinus, the ash, "the juice of three or four leaves taken every morning makes those lean that are fat." The bark and wood dry and desiccate and are supposed to soften the spleen; the juice of the leaves and tender twigs is said to do good in dropsies, the salt of it provokes sweat and urine".

(*To be continued*)

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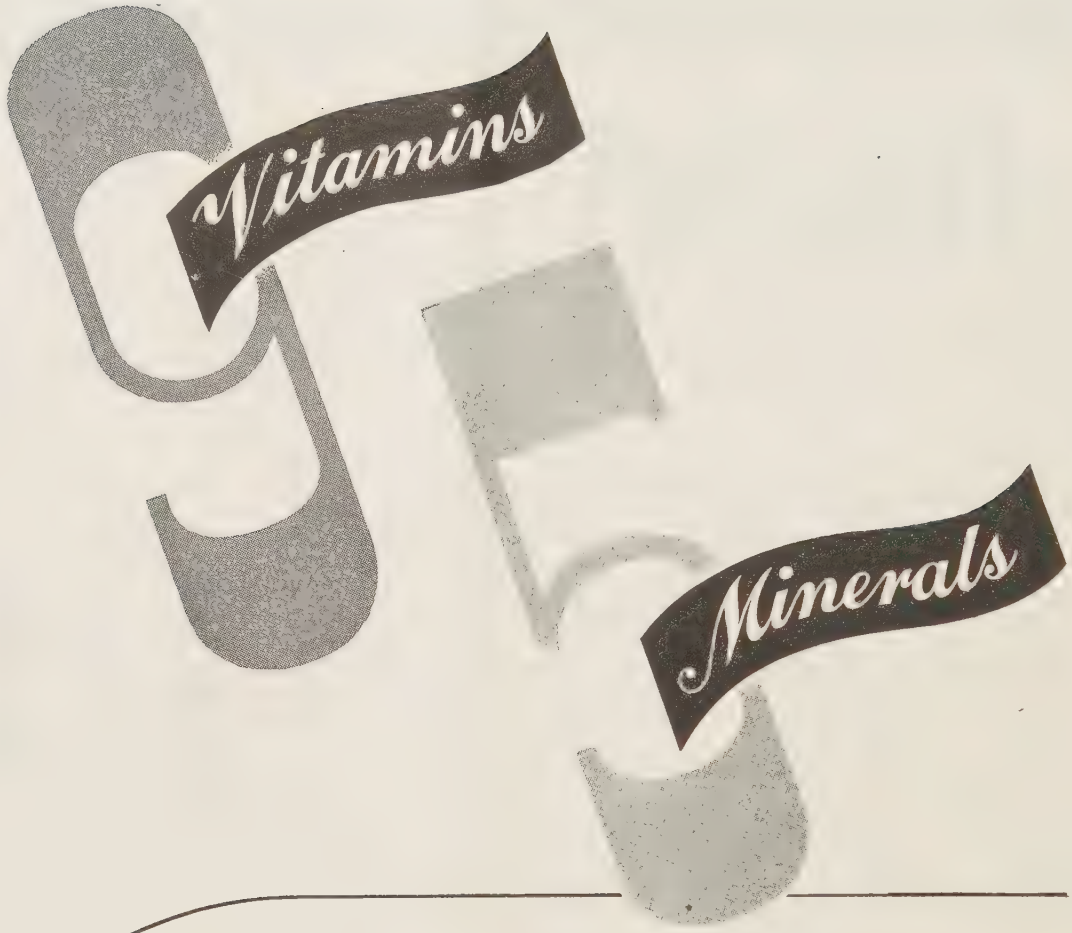

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MEDICAL RECORD

PUBLISHED MONTHLY BY
THE MEDICAL JOURNAL AND RECORD PUBLISHING CO., INC.

VOL. 158, No. 6 JUNE 1945 WHOLE No. 2749

THE VALUE OF RECTAL EXAMINATION IN PELVIC DISEASE

With Report of Six Cases

JULIUS GERENDASY, M.D.
Elizabeth, New Jersey

The value of rectal examination in the diagnosis of diseases of the organs proximal to the rectum will be appreciated by a review of the anatomy of the rectum and its relation to the pelvic organs.

The rectum is the dilated terminal portion of the distal colon. It communicates with the exterior through the anal canal which is encased by the sphincter muscles. The rectum begins at the level of the third sacral vertebra where it is continuous with the pelvic (sigmoid) colon. Descending in the concavity of the sacrum and coccyx it rests for about one and one-half inches on the pelvic floor formed by the union of the levator ani muscles. Opposite the prostate it bends backwards at right angles to end in the anal canal. Viewed from the lateral aspect the rectum presents two constant flexures, the sacral (partly covered by the peritoneum) with its concavity anteriorly, and the perineal (ampulla) with its concavity dorsal (1). They indicate the direction to be followed in digital or instrumental examination.

The length and diameter of the empty rectum varies greatly in the living subject. The female organ appears to have a greater capacity than the male. Atonicity or spasticity of the organ also is a factor. Bacon (2) found the average length, measured by special means, to be five and four-tenths inches, exclusive of the anal canal. The latter measures between one-half and one and two-tenths inches.

In spite of this unusual length, the average index finger measuring two and a half to three and a half inches from the third metatarsal joint[1], can easily palpate, with the patient in the proper position, the rectal ampulla, the bony pelvic structures and the pelvic organs subsequently to be enumerated.

Viewed from above, the empty rectum occupies only a small part of the posterior portion of the pelvic cavity; even when distended it spreads laterally into the pararectal fossæ. The anterior or ventral portion contains the urogenital organs in intimate relation to the rectum. These organs differ in the two sexes. In the female, anteriorly, lie the broad ligament, the tubes and ovaries, the body of the uterus, the cervix uteri and the posterior vaginal wall. The cervix forms a well-rounded prominence and may be mistaken for a pelvic tumor. In the male, the rectum is in close relation, from above downward, with the bladder, the seminal vesicles and a portion of the vas deferens, the two lobes of the prostate and the deep urethra (3).

In the normal state most of these structures may be palpated by the examining finger in the rectum but more easily when involved in a pathological condition.

Besides the important relations of the rectum enumerated, brief mention should be made of the pararectal fossæ in the peritoneal cavity. These contain the pelvic colon or coils of the small intestine. Occasionally a long appendix dips into the right pararectal fossa. In suspected malignancy of the gastrointestinal tract, metastatic glands may be found here; in the male on Blumer's shelf (4), and in the female as a Krukenberg tumor (5) usually involving both ovaries.

Preparation of the patient.—The rectum must be empty to carry out a satisfactory examination of the pararectal structures. A low cleansing enema, properly given at least four hours before the examination, will be satisfactory in most cases. Rarely is sedation necessary unless the patient is extremely nervous or has a painful lesion. A sedative tablet may then be given one hour previous to the examination.

Position of the patient.—The left lateral position is most practicable. The patient is on the left side, the chest resting on the table, the thighs flexed on the body with the right higher than the left and the hips close to the edge of the examining table. It is the position for anal inspection, anoscopy, digital examination of the rectum, and especially bimanual examination of the pelvic organs.

Method of Examination

The bimanual examination utilizes the right index finger high in the rectum and the other hand placed on the lower abdomen (with the bladder empty). The pelvic organs are then approximated to the fingers; rectopelvic palpation. All tight clothing should be removed from the abdomen. With this method the experienced finger will supply information of the pelvic organs and surrounding structures, in both sexes, of inestimable value.

It is especially applicable in the female. The diagnosis of the common condition of retroversion of the uterus is easily made. The presence of pelvic inflammatory disease of the tubes and ovaries is readily de-

[1]Unpublished data.

termined, as well as uterine fibroid and carcinoma. Extrarectal masses may also be of inflammatory origin, that is, the result of regional ileitis, perforation of a sigmoidal diverticulitis and tuberculosis of the ileocecal region (6).

In the diagnosis of endometriosis, rectopelvic examination may reveal a nodular fixed uterus associated with exquisitely tender nodules in the rectovaginal septum or stenosis of the sigmoid and rectum secondary to diffuse involvement of the ovaries, tubes and uterus. The history of severe dysmenorrhea and usually sterility in a married woman past forty years of age, with bowel symptoms suggestive of obstruction, are important aids to diagnosis (7, 8).

In early pregnancy the bimanual rectal examination will be found less painful and equally as diagnostic as the vaginal route. In the pelvic examination of very young children, virgins and aged females rectal palpation will supply information of value.

In surgical affections of the lower abdomen, as in suspected cases of acute appendicitis, or rupture of an appendicular abscess, rectopelvic examination is an important diagnostic procedure and should never be omitted. The bony structures of the pelvis may be palpated between the index finger in the rectum and the thumb externally. The cause of many obscure pelvic symptoms will thus be disclosed. This applies particularly to coccygodynia, fracture or dislocation of the coccyx, and tuberculosis of the sacroiliac and hip joints.

It should be the rule to palpate the prostate whenever a digital rectal examination is performed. One should note bony induration, fluctuation and tenderness or atrophic condition of the gland. In infants and children, the average adult index finger may, with gentleness, be inserted through the sphincter ani without trauma and congenital sacral and other pelvic masses palpated. Reassurance and a gentle finger will obtain the cooperation of the patient and facilitate the examination.

In all cases where an extra rectal mass encroaches on the lower bowel, proctosigmoidoscopy is indicated to determine whether the condition is in the rectum or the intrapelvic organs.

A review of what has been stated reveals that rectal examination is applicable in a wide field of medical practice. Thus, in genitourinary affections, gynecology, surgery, obstetrics, orthopedics and pediatrics, the method will be found a useful adjunct to other means of diagnosis.

Illustrative Cases

The following case reports are illustrative examples. It should be noted that the majority of patients complained of rectal discomfort. The finding of an extrarectal mass was the first evidence of a serious lesion. For the sake of brevity only the essential history is presented.

CASE I.—*Genitourinary.* A forty-five year old man was seen in the rectal clinic complaining of pressure in the rectum with a constant urge to defecate, of one week's duration. Urinary symptoms were absent. He appeared acutely ill with an elevated temperature. Rectal palpation revealed a fluctuating tender prostate, which was the seat of an acute abscess. The patient was referred to the genitourinary service of the clinic for appropriate treatment.

CASE II.—*Gynecological.* A thirty-two year old woman, married, of unimpeachable character, was referred for proctological consultation because of periodic lower abdominal pain of two years' duration. The pain occasionally radiated throughout the abdomen. During the last pregnancy, which terminated five months previously, the distress was relieved. For the past month, however, it had been practically constant. A full rectum aggravated the distress. The one suspicious circumstance in her otherwise normal menstrual history was postmenstrual staining of two to three days' duration. Rectopelvic examination disclosed a large tender mass in the left pelvis in intimate relation to the uterus, apparently of ovarian origin. Pelvic exploration revealed chronic infection of the left ovary. The mass was removed and a smear revealed the gram negative intracellular diplococcus (gonococcus).

CASE III.—*Gynecological.* A woman, several years past the menopause, was referred to the rectal clinic because of vague abdominal distress, rectal tenesmus, constipation and anorexia. A gastrointestinal series was negative. Rectopelvic examination revealed a mass in the left pelvis apparently originating in the ovary. On proctosigmoidoscopy the absence of an intrinsic lesion was noted. Laparotomy revealed an ovarian tumor, which on biopsy proved to be primary adenocarcinoma, grade two.

CASE IV.—*Surgical.* A young woman, sixteen years old, developed intractable diarrhea two weeks after an appendectomy. Up to the tenth day progress was favorable, then pulse, temperature and respiration increased. Foul yellow watery bowel movements occurred almost hourly and ordinary means of control were unavailing. Tenesmus due to a constant urge to defecate led to a request for rectal examination. This revealed the caliber of the rectum markedly decreased by a large boggy tender mass occupying the left pararectal fossa. Incision through the rectum drained a pelvic abscess. She made an uneventful recovery.

CASE V.—*Surgical.* The patient was a man aged thirty-two, whose chief complaint was lower abdominal cramps of six months' duration, associated with attacks of diarrhea alternating with constipation. Progressive asthenia and weight loss were also present. Proctosigmoidoscopy revealed a pale, dry, easily traumatized lower bowel; no evidence of ulceration, adenoma or growth. Rectopelvic examination revealed a boggy sausage-like mass occupying the right pelvis. Exploration showed this to be hypertrophic tuberculosis of the terminal ileum and cecum. An ileotransverse colostomy was done with relief of all symptoms.

CASE VI.—*Obstetrical.* Mrs. J. K., nullipara for five years, had irregular, painful, scanty menstruation occurring about every three or four months. She was desirous of becoming pregnant and consulted her family physician. He suggested a series of biweekly injections of estrogenic substance. After the thirteenth injection, intractable emesis developed, aggravated by constant ptyalism. This was ascribed to drug intolerance which was therefore discontinued. When consulted two weeks later the patient was quite ill and dehydrated because of inability to retain food or liquids. Routine rectopelvic examination revealed the uterus enlarged to about two months pregnancy. A Friedman test was positive. In retrospect, the patient insisted that pregnancy had occurred prior to estrogenic therapy.

Summary and Conclusions

The anatomy of the rectum and its relation to surrounding structures is outlined. The proper position and method of examination is discussed.

A much neglected diagnostic procedure is here recommended. Pelvic infections; injuries of soft parts; dislocations or fractures of bones and joints may be detected on rectal examination; also the presence of tumors, benign or malignant, primary or metastatic may be determined.

Besides diagnosis, the method is of value in prognosis. In gastric malignancy the discovery of a metastatic gland on Blumer's shelf will indicate the inoperability of the lesion. Similarly, bilateral tumors of the ovaries associated with ascites indicate a fatal issue in the female. A knowledge of the presence of an ankylosed sacrococcygeal joint is important to the obstetrician, as it may interfere with parturition.

The operability or inoperability of carcinoma of the cervix may be determined much more accurately by palpation through the rectum than any other way.

In conclusion, it is recommended that in the presence of lower abdominal symptoms referable to the rectum, a careful rectopelvic examination should be an integral part of the physical examination.

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956 EAST JERSEY STREET

RECTAL HERNIATIONS VS. RECTAL PROLAPSE AND THE INTRASPHINCTERIAN HERNIOPLASTIC OPERATION

CHANNING W. BARRETT, M.D., F.A.C.S.
Chicago, Ill.

Rectal protrusions were noted and were commented upon in a paper read before the Chicago Gynecological Society in 1908, on "Hernias Through the Pelvic Floor". This called attention to the bowel and the pelvic floor, but also stressed the detachment of these structures as a part of the pathology. This article dealt mainly with hernias of genital origin, but stressed the interrelation of the two, as students of the pelvic floor must recognize the inseparable interrelation of support and impairment of support of these two closely attached tracts. Montgomery followed with "Hernia of the Pelvic Floor" and gave credit to my work. Since then I have written upon "Interrelation of Impairment of Genital and Rectal Support."

The caudal portion of the abdominal wall, which is to this region what the ventral wall is to the large ventral area, has not only the ventral area's opportunity for hernias, but this susceptibility is greatly multiplied in the human by the caudal wall's low position, and its clefts providing passage for the rectum, vagina and urethra. These tracts pass through and are supported by the same musculofascial wall, and although artificially the wall is divided into the anterior and posterior triangle, the damage in one triangle easly extends to the other so that the interrelation of faulty support is inevitable. The passage of abdominal structures, such as the rectum, vagina, uterus and bladder, through this wall to a position outside it, is distinctly a hernia, and has not the least semblance of a right to be called a prolapse, despite the centuries of erroneous precedent, dating from the time when clinical observers were hazy about the wall and scarcely knew there was an enclosing pelvic floor.

Sappey says, even in later years, "the levator ani muscle is one which we have studied the most and yet one of which we know the least". The efforts to adapt structures to the surgical cure of prolapse in the last fifty years is a sorry commentary and is based not a little on the misunderstanding of the condition to be cured. If the condition of hernia had been thoroughly and universally recognized, many shortcomings would have been obviated, for the very term "hernia" compels one to recognize the necessity of a pelvic floor repair, and again a good understanding of the caudal wall anatomy leads definitely to the conclusion that protrusions through this wall cannot be anything else than hernias.

The hernial nature of genital and rectal protrusion has been emphasized in my clinics and classes since the above-mentioned publications and before. All protrusions that could not be returned, or which recurred soon after being replaced were considered hernias. Such cases were treated by taking off the herniated damaged end of bowel and attaching the end of the remaining bowel to the skin and sphincter. The sphincter and skin circle were brought down in size by one, two or three sutures according to the existing over size. In France, in 1918, such a procedure was done on a herniated bowel which was then satisfactory from external appearances, but the pelvic floor did not properly encircle and grasp the bowel above the sphincter, so a crescent-shaped incision was made posterior to the rectum, and the cleft in the pelvic floor was narrowed and attachment was made between the rectum and the musculofascial ring. In mild herniations such repair has been combined with the sphincter repair with the posterior sutures. Cuneo and Seneque reported such operations by anterior or posterior operations or both in 1931. They report this

perineal repair for prolapse as reported by Carrasco, but no report is made of prolapsed rectum for which they were operating. In his four hundred references to prolapse of the rectum, herniation is scarcely mentioned.

In *Pathogenesis, Anatomy and Cure of Prolapse of the Rectum,* Moschcowitz offered the presence of the culdesac as evidence of the hernial origin of the prolapse. We are speaking of straight protrusions of the bowel through the pelvic floor, with or without peritoneal involvement. These conditions do not base their claim to hernia upon the peritoneum preceding or following the mass, or upon any structure coming through the rectum or anus, but upon the protrusion of structure through the posterior cleft of the pelvic floor.

Graham and Isadore Cohn have recently proposed operations on the basis of hernia for socalled prolapse of the rectum. Allen presented a paper before the 1944 meeting of the American Proctological Society, reporting interesting cases of extreme herniation treated by the intrasphincterian hernioplastic operation.

The musculofascial opening is the hernial ring and the bowel mass becomes the herniated structure if and when it passes the opening in the pelvic floor. If an intussuscepted bowel arrives into the rectum, that does not constitute a hernia, but if it comes further and passes through the pelvic floor opening, it becomes a herniation of an intussuscepted bowel, which greatly complicates the intussusception. The rectum may or may not herniate. If the upper end of the rectum intussuscepts into the lower end of the rectum, it does not become a herniation until it passes the pelvic floor ring.

So many misconceptions and faulty procedures have followed the almost universal use of the term prolapse, that in the adoption of the term hernia as according to facts, we should be very meticulous to rid the subject of all mystery and false procedures and base our thought on sound anatomy and well-grounded pathology. Progress in meeting complicated conditions will then be somewhat hampered, but surgery of the pelvic floor and its herniations will progress on a sound basis. The terms "prolapse of the uterus", "prolapse of the rectum" and "procidentia" do not accord with the anatomical and pathological facts in a way to warrant a continuance of their use, for in every sense they are misleading.

Viewing rectal protrusions as hernias, we have to consider them from the viewpoint of: first, departures from normal of the pelvic floor or caudal wall; second, departures from normal of the herniating structure and loosening from supports; third, departures from normal of the intraabdominal ligamentary supports; fourth, of those conditions which arouse overactivity of the bowel or underactivity, calling for frequent and excessive straining, as in constipation, diarrhea and dysentery in children; fifth, we must consider them from the viewpoint of conditions of intraabdominal pressure such as tend to develop all hernias; and sixth, we must consider them from the viewpoint of immature tissues as in children, or overmature tissues of the aged, or degenerated tissues of generally weakened musculatures, and lastly but not the least important, they must be considered in relation to associated and correlated pathology.

Most cases are seen in the very young or very aged, in those with prematurely weakened structures, or those that are overworked and overstrained. Many cases are seen in children in which relief and cure may be obtained by replacement, rest in bed, head low, feet high, with anal plug and anoperineal pad. Whooping cough, bronchitis, etc., should be relieved; diarrhea and dysentery should be cleared up, a phimosis or other urinary obstruction or irritation should receive attention. The condition should not be treated surgically until proper nonoperative measures have been tried.

A frequent picture is that of pelvic floor injury from childbirth, herniation in the anterior cleft, with developing hemorrhoids, detachment of the rectum from its supporting structures, much play of the rectum from moderate bulging to considerable herniation, when with a fall, severe strain or heavy lifting or prolonged effort, a sudden herniation takes place, of walnut, to egg, to orange size, through the posterior cleft.

The herniation may rapidly grow larger or may progress slowly, sometimes increasing steadily, sometimes by periods of greater strain. The mass is sometimes retained after manual replacement, sometimes for a considerable period, but is apt to recur with defecation and also with other efforts. Periods of protruding piles, bleeding piles, hemorrhages, ulceration, thrombosis, sepsis, gangrene, etc., are a part of the picture. Finally, the hernia is driven out so that it is incurable by other than surgical measures.

If the fact of its being a hernia could be generally accepted, a mild, safe, hernioplastic operation could be done when the tissues and the resistance of the patient were in good condition. A goodly portion of herniated bowel might be returned to the abdomen if a proper hernioplastic operation was performed while the tissue was in good condition. The early recognition of hernia would almost entirely do away with the intraabdominal employment of an intestinal rope to hang the pelvic floor upon. The pelvic floor has been constructed to support organs above it instead of reversing them or of making the rectum, sigmoid or colon suspend the caudal abdominal wall.

The frequency of rectal herniation in childbearing women compared with those who have not undergone childbirth shows that process to be a marked etiological factor, but the fact that it occurs, even though less frequently in the male, and in nonchildbearing women, demonstrates that there are other etiological factors. The rectal herniation may be accompanied by extensive vaginal, uterine and bladder herniation, the bladder herniation resulting in obstruction, may result in bladder stone formation.

In both sexes it is quite within reason that a congenital weakness of the pelvic floor plays a part. Constantly standing under more or less strain, without change of position, plays a part, as is well known in other hernial formations. Bladder stone and urethral stricture are well known factors in causing rectal strain. Irregular bowel hygiene and large, hard bowel movements, with resulting difficult defecation, are marked factors leading to overstretching of musculofascial rings. Sodomy plays a part, especially in longstanding prison habitues, although it is not limited to prison life.

Domestic animals are subject to such herniation, although no doubt the tendency to such herniation is greatly lessened by the high position of the anal outlet. An Italian barber surgeon recently related the case of a jenny, owned by his family, that herniated four feet

of bowel, which was returned by the town blacksmith in the absence of a veterinarian. The jenny lived several years without return of the trouble. The human probably lacks equal chances of recovery by reason of the upright position. Cases have been reported of individuals having considerable capacity for extruding a foot or more of bowel and then retracting it by reversal efforts.

Rectal herniation is a process in which we must recognize: first, the changes which have taken place in walls; second, the changes which have taken place in the herniated viscera; and third, the separation of these structures, the one from the other. In the female one must often take account of the extensive visceral herniation through the anterior cleft, which may require attention at the same or another time. One who thinks that the proctological interests can be separated from the gynecological must not have considered how the two run together in a rectocele and in a complete laceration of the pelvic floor with a sphincter and rectovaginal septum involvement. One must take into consideration the accumulation of effort which tells upon the resistance, but one must also recognize the lessened resistance of tissues which give way under a load formerly easily born, so that rectal herniation is frequently a fellow traveler on the "down hill road".

As one now contemplates the surgical treatment of caudal protrusions, if one considers it prolapse, any thought of the lower abdominal wall is eliminated, for if the lower abdominal wall is considered it becomes a hernia and the pelvic floor is defective or the mass would not have come through. Any measure that deals with the mass as a prolapse undertakes to deal with this rectal pathology only, whether it be an abdominal suspension or an outside amputation, or both.

Any treatment that deals with the protrusion as a hernia undertakes to rid the bowel of its pathology and repair the defect in the lower abdominal wall, as is done in an umbilical or inguinal hernia. Here we have the added problem of maintaining a bowel opening, so no matter how much of the bowel must be removed, the end must be surrounded by the sphincter and pelvic floor, both openings having been reduced in size by the hernioplastic operation.

The end of the bowel must now be attached to skin and the sphincter reduced in size. This is accomplished, as described in the *American Journal of Surgery,* as follows:

1. The patient is prepared generally and locally for a major operation.

2. The patient is in the lithotomy position—hips elevated and projecting well over edge of table.

3. The sphincter ring and pelvic floor ring a little farther in are felt very large, sometimes admitting the whole hand or fist.

4. The skin mucous membrane margin is picked up with tooth forceps at twelve, three, six and nine of the clock face.

5. Incision is made from twelve to three, three to six, twelve to nine, and nine to six, all just inside the sphincter.

6. Edges of the severed bowel are picked up by several forceps and drawn toward the operator and the bowel severed from surrounding tissues by mostly blunt dissection, and occasional snipping of attached fibres. This outer sheath of bowel is turned down, doubling the length of bowel—that is, a four inch projection of hernia will become an eight inch projection of bowel; a ten inch hernia will become a twenty inch projection. An extensive herniation will show a posterior curve because of the mesentery, and the posterior culdesac will usually be encountered. This should be drawn down, freed from visceral contents and tied off. A long portion of bowel will hamper manipulation, so may be amputated, leaving a four to six inch projection.

7. The bowel is now drawn backward and a smooth-bladed retractor holds the sphincter forward. This makes an exposure through which the border of the pelvic floor structures can be picked up on each side and united in the median line with two or three ties of ten day catgut. The posterior one should take a bite of the anterior wall of bowel.

8. The bowel is now drawn forward, the sphincter is retracted backward, and through this exposure the pelvic floor structures are picked up as in front. Usually one more suture is used posteriorly than anteriorly. The most anterior suture takes a nonpenetrating bite of the posterior wall of the bowel. The pelvic floor structures are attached to the side of the bowel on each side.

9. The superficial layers of sutures are now placed. Two or possibly three catgut sutures bring the skin and sphincter from one side to meet the equivalent structures of the opposite side.

10. The rectum is now held backward and like sutures lessen the size of the skin and sphincter circles. One more suture is used in front than in back.

11. The bowel is now amputated and its edges united to the skin and sphincter, completing the intrasphincterian hernioplastic repair for rectal herniation.

There are those who prefer silk, cotton, linen or fine silver sutures.

One thing that might keep this from being an almost ideal operation is the fact that many neglected cases have developed such degeneration that healing is faulty and tissue may slough. Secondary operations have brought about good results in even those bad cases that had some necrosis. Recognition of the condition as hernia will lead to earlier and more rational treatment.

Conclusions

1. Rectal protrusions are hernias through the pelvic floor.

2. Prolapse is downward wandering of viscera in the abdomen.

3. Hernia is wandering of abdominal viscera or structure through or outside the abdominal wall.

4. The term rectal "prolapse" as a word implies a faulty condition or position of the bowel and treatment has been directed at the bowel alone.

5. Rectal herniation implies a faulty pelvic floor, with such changes in the bowel as herniation has brought about and separation of the bowel from its supporting structures has taken place.

6. Pulling the rectum up by suspension, removal of herniated portion of the bowel without hernial repair of the pelvic floor, and operations upon the mucous membrane or reefing of the bowel wall, are products of the prolapse theory, and therefore faulty.

7. Herniation of the bowel should have the same sound principles applied to its cure as is used in inguinal or umbilical hernia.

8. Other methods may be devised, but if so, they should be such as are based upon the cure of rectal herniation.

9. General adoption of the hernia theory instead of prolapse would be rewarded with more progress in ten years than has taken place in the last one hundred years of prolapse treatment.

10. It is difficult to base good surgery on unsound pathology.

11. So many factors of pelvic floor construction, impairment and reconstruction are involved that we think it proper to refer to it as rectal and pelvic floor engineering.

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4753 BROADWAY AVENUE

SYMPATHETIC HYSTERIA

A Case History

HOWARD CHARLES GALE, M.D.
Beverley, Mass.

The present war bids fair to produce a considerable increase in the number of cases of hysteria and nervous excitation. Not all cases of hysteria, however, can be traced to the present situation; the case herein reported illustrates that point.

This case concerns a family of French-Americans of average education and intellect. At the time, there were three members of the family at home; Mrs. L., aged fifty-three; a daughter, Miss G., aged eighteen; and a younger daughter, Miss M., aged sixteen.

Miss G. was confined to her bed with an infected toe, which disability, however, did not contribute to the case except that, to facilitate family work, a bed had been installed for her in the sitting room, and it was here that the incident occurred.

On the day in question Miss G. telephoned and in a voice denoting excitement summoned me to her home saying, as nearly as I could determine, that her mother and sister were in her room, that they were dying, were already unconscious, and that she herself was rapidly losing consciousness. I suspected food or gas poisoning.

On entering the patient's home I found all three members of the family in the sitting room; Miss G., in bed, excited, thrashing about, screaming and calling on me to do something for her mother and sister and to save her from dying. The mother and younger sister were both in chairs apparently unconscious, their heads thrown back, their arms hanging over the sides of the chairs, their eyes closed, and breathing with irregular gasps. They could not be aroused. Pulse was normal. Their faces were slightly flushed, skin and extremities normally warm; patella reflexes increased. Finding no immediate cause for alarm I directed my attention to Miss G. who was still conscious, in spite of her repeated assertions that she was about to die. According to her story, she was in bed, her sister was sitting in the same room, and both were engaged in a calm, general conversation. The mother was in the kitchen which adjoined, about her housework. Suddenly, with a scream and for no apparent reason, the mother rushed into the sitting room, falling into a chair with some indefinite articulations about "dying" or "dead", whereupon she appeared to lose consciousness and was thought, by the two daughters, to be dying. Immediately, the younger daughter screamed and falling back in her chair likewise appeared to expire. Then it was that the family physician was summoned.

Repeated inquiry elicited no reason for the mother's initial condition. Investigation as to food ingested, escaping gas or other odors, sudden shock from unwelcome news or accident led to no definite conclusions.

Feeling confident that it was a case of hysteria, treatment was directed along the usual lines. Recovery was normal except that the mother was confined to bed and depended on sedatives for a few days.

As the mother was regaining consciousness, I caught a vague remark about a "dead bird." In the kitchen the pet bird was on the floor of its cage, dead. It appeared that the mother had noticed the unusual behavior of the bird and as she was about to examine it, the bird fell off its perch and died. This was the initial cause of the hysteria.

Whether the proximity of the menstrual period in the two younger members of the trio was a contributing factor in their heightened sensibility is an open question. I merely submit that it may have been a possibility.

Summary

A case of simultaneous hysteria in three persons, caused by a trivial incident, has been reported. None of the victims appeared aware of the exciting cause.

Conclusion

Hysteria may develop in several persons simultaneously, probably because of an unstable emotional background and the bond of sympathy existing between persons closely allied.

16 BROADWAY

Symposium on Ophthalmology

OPHTHALMIA NEONATORUM

G. GRIFFIN LEWIS, M.D.
New York, N.Y.

The subject of this paper is of the utmost importance, especially to the general practitioner and the obstetrician in particular, as it is they who first see these cases and who, by the employment of prophylactic measures can, in the great majority of instances, prevent the occurrence of this dreadful disease or, by its recognition and proper treatment in the early stages, prevent the serious sequelæ which are sure to occur in neglected or improperly treated cases.

I know of no sadder or more pitiable sight than that of a young mother, just out of child bed, with her first infant hopelessly blind for life. It is one which touches the sympathetic cords of the most hardened hearts. Yet, there are thousands of such pathetic little figures, who through no fault of their own, are destined to a dreary existence in unending night, cut off from fields of usefulness, always to be dependent upon others, and a great financial cost to the community in which they live.

It has been estimated that fully thirty percent of the inmates of our institutions for the blind are victims of this disease, and when we consider, first, that it is perfectly preventable and therefore should never occur, and second, that it is perfectly curable after it does occur if early and proper treatment is instituted, we cannot help but feel that such statistics are nothing less than a stigma upon the profession which we represent and that the physician who does not diligently and conscientiously adopt the proper prophylaxis and treatment for these cases, is just as much a subject for professional and public censure as is he who loses a case of diphtheria from not having used diphtheritic antitoxin.

Etiology

Ophthalmia neonatorum is a disease which occurs coincident with birth and is due, in the majority of instances, to infection during passage of the baby through the vagina. It has been proved, however, that it is possible for this infection to take place *in utero,* as children who have been delivered by Cæsarean section have had it, and in many instances, when it occurs at remote periods after birth, it is due to the unsanitary or unskillful management of the child immediately after birth, from contaminated fingers, linen or other clothing. As a rule, cases which occur before the second day after birth are due to intrauterine infection and those which occur after ten days are due to secondary infection.

In the majority of instances ophthalmia neonatorum is due to the existence of an often unsuspected or unrecognized gonorrhea in the mother, as frequently months and sometimes years after manifest evidences of this disease have disappeared, the gonococcus still remains in the deeper tissues ready to develop when the latter are subjected to the strain of child birth. In such cases the child's eyelids become smeared with vaginal or urethral discharge during the passage of the head through the vagina and as soon as the eyes are opened they become inoculated with the gonococcal virus which grows with great readiness upon the warm, moist conjunctiva.

Ophthalmia neonatorum is not always due to gonococcal infection. Fully one-third of the cases are caused by other organisms such, for instance, as the micrococcus of Pasteur, the bacillus of Weeks, the pneumococcus, the staphylococcus aureus, the bacillus coli or the Morax-Axenfeld diplobacillus, most of which will produce a discharge of yellow matter from the eyes, when infection has occurred, hence the importance of making a bacteriological examination of the discharge in order to ascertain the variety of organism with which we have to deal. This cannot be accurately determined by smears alone, cultures should also be taken, for while some of these organisms will grow in ordinary media the gonococcus will not.

Generally both eyes suffer, although one may be earlier and more decidedly affected than the other. The inoculation period ranges from a few hours to ten days. The stage of infiltration lasts for two or three days, followed by symptoms of an acute catarrhal conjunctivitis. Later the lids become swollen and hard, the conjunctiva becomes chemosed and the discharge changes from a watery one to a pussy one. In severe cases a croupous deposit may form on the conjunctival surface. The edges of the lids become agglutinated or, on account of the swelling, the upper one cannot be raised so that the pus is retained under pressure. When the lids are drawn apart by the fingers of the observer, the pent-up matter gushes forth and may spurt up some little distance. The physician and nurse should bear this in mind lest, bending too close over the patient, they receive some of the discharge in their own eyes.

The disease usually reaches its height in about ten days and runs a course of from six to eight weeks.

Importance of Prophylaxis

There is no pathological condition where the observance of prophylactic measures is of more importance than in ophthalmia neonatorum. They should be directed towards both mother and child and consist in those indicated before birth, during birth and just after birth.

As a mucous discharge occurs in nearly all pregnant women, especially during the last days of pregnancy, physicians engaged to attend a woman in confinement should make inquiries as to the existence or nonexistence of a vaginal discharge, and in the event of its existence take steps to ascertain whether it contains gonococci.

While it is practically impossible to render a septic vagina perfectly aseptic, nevertheless, careful attention

to these parts previous to and during parturition will reduce to a certain extent the dangers of this disease. If the discharge does contain the gonococcus, we should not rely on the antiseptic douche alone, but should use a Sims speculum and carefully swab the vagina with sterile gauze soaked in soapy water. In all cases where there is a vaginal discharge, even though it does not contain gonococci, vaginal cleansing should be carried out.

By a little tactful questioning the physician can ascertain from his patient, without arousing her suspicions, whether or not she complains of frequent and burning urination, followed by an increase in the amount of vaginal discharge, symptomatic of gonorrhea.

During confinement, after the head is born and the pains cease for a moment, the obstetrician should take a piece of sterile gauze and carefully wipe the secretions from the eyes and face of the partially born child, and, as soon as the cord is tied and the mother is out of danger, the child should be placed on its side and the lower eye opened and flushed with a warm saturated solution of boric acid, followed by the instillation of either a one-half to one percent solution of silver nitrate or a twenty percent solution of argyrol. This proceeding is then repeated on the opposite side. Should there be any reason to suspect gonorrhea in the mother, or should the baby's eyes appear the least red, irrigate with a one-tenth percent solution of silver nitrate every two hours during the first few days.

Midwives, who attend so many births, bear an important relation to the control of this disease. For the most part these women are untrained, grossly ignorant, and careless of prophylactic methods. There should be some sort of legal enactment by which they could be subjected to some form of restraint and examination as to their efficiency before they were permitted to practice their profession. They should be licensed and under the supervision of the local board of health to whom they should be required to report every case of sore eyes under penalty of fine or forfeiture of their license. Birth certificates should contain statements signed by the attending physician or midwife to the effect that proper solutions had been used in the baby's eyes at the time of birth, and in case ophthalmia neonatorum developed when such procedure had been neglected, they should be deemed guilty of criminal negligence.

Since ophthalmia neonatorum would practically never occur if the eyes of all new born infants were properly cleansed and prompt and efficient medical attention administered upon the appearance of its early symptoms, all persons employed to assist in birth, whether physician or midwife, having been given warning of the danger and the means of avoiding this disease, should be held strictly accountable for damages resulting from their neglect.

The general public should be repeatedly told in plain language, until they fully understand the gravity of this disease, and appropriate literature should be furnished to midwives, nurses and prospective mothers giving instructions as to its dangers, methods of infection and prophylaxis.

While it is conceded by all that it is infinitely easier to prevent disease of this kind than it is to cure it when it has become established, ophthalmia neonatorum can invariably be cured without any of the disastrous sequelæ if taken early and properly handled. Frequent and copious irrigation of the eyes with some mild antiseptic solution is of the utmost importance, not so much for its antiseptic as for its cleansing effect, as solutions which are strong enough to be bactericidal would tend to injure the cornea and add to the danger which the treatment is intended to avert. They should be used frequently enough to prevent the accumulation of pus under the lids, varying from once in two hours to every fifteen minutes, according to the quantity and quality of the discharge. For this purpose may be employed warm solutions of permanganate of potash 1-2000 to 1-5000, cyanide of mercury 1-5000, normal salt, boric acid, borax or silver nitrate one-fourth to one-half percent, using for each irrigation from one to two quarts in a perfectly sterile glass fountain syringe with a blunt pointed glass nozzle which can be easily sterilized.

The child should be held in the lap with its head a little lower than the body and resting on an oilcloth or Kelly pad. With the container elevated to a foot above the head, allow the warm solution to flow gently first over the closed lids, and after they are thoroughly clean, separate the lids with the thumb and forefinger directing the stream over the cornea and in the cul-de-sacs. Use enough solution and force to dislodge all discharge from the tissues. Precautions should be taken not to touch the cornea with the nozzle as an abrasion of that membrane would almost certainly result in ulceration. The operator must also take care that the solution does not splash into his own eyes.

When not irrigated properly or often enough the lid margins become glued together by the discharge, and further accumulation of pus exerts a pressure on the cornea, interfering with its nutrition and causing ulceration of that membrane. The instillation of a few drops of warm castor oil or the application of borofax to the lid margins will not only prevent friction between the roughened conjunctiva and the cornea but will also prevent the lids from sticking together. Only the expert should attempt to evert the upper lid; use a lid retractor or remove matter which still adheres after irrigation.

Choice of Solution

There is a wide difference of opinion as to which particular solution is preferable for the purpose of irrigation. Personally, I prefer permanganate of potash, boric acid, or a one-fourth percent silver nitrate, the latter followed by the normal salt which not only neutralizes the silver but, being, so near the same composition as the lachrymal fluid, it is nonirritating.

Silver used in this strength and manner seems to be just as effective and less irritating than when a two percent solution is dropped into the eye as advocated by Credé. Although the Credé method of dropping into the eye a two percent solution of silver nitrate has for years been universally practiced, I have seen cases where it interfered with the integrity of the cornea and produced cloudiness of that membrane which lasted for several days. I do, however, most emphatically advocate the use of a two percent solution carefully brushed over the everted lids once a day and immediately neutralized by irrigating with normal salt or boric acid solution. This irrigation should be continued until the coagulated albumin caused by the silver has been wholly washed away and then a few drops of warm

castor oil instilled as a protection to the cornea from the harsh condition of the lids produced by the silver.

We must remember that the efficacy of silver depends entirely upon the manner in which it is used, bearing constantly in mind that the one tissue to be protected in its use is the cornea. Therefore, in applying it, the lids should be everted and pressed closely together so that the cornea is well covered before the application is made and then the neutralizing solution used before allowing the lids to turn back.

At the onset of the disease when the gonococci is still on the surface of the conjunctiva, silver will arrest their development, but when the disease becomes well established and the gonococci have penetrated the tissues, the coagulated albumin caused by the silver will prevent that remedy from penetrating deeply enough to destroy these germs, therefore, the necessity of removing the coagulation by copious irrigation. Here, one of the silver salts, preferably argyrol which does not cause coagulation of the albumin, is the remedy *par excellence*. A twenty or twenty-five percent solution should be freely instilled every hour or two. Some authorities advocate its use every fifteen minutes in this stage of the disease. Argyrol contains twenty percent silver, clings tenaciously to the membrane, penetrates deeply, tends to float the pus out of the hollows of the conjunctival sac, never irritates, and does not have to be neutralized, but the solution should be freshly made each day. If the discharge becomes tinged with blood, showing irritation from the silver, it is best to discontinue its use for awhile and depend upon the argyrol and irrigation alone.

Sometimes in the more severe cases a pseudo-membrane resembling that of diphtheria forms on the under surface of the upper lid. This should not be removed by forcibly wiping it off, which is likely to produce abrasions of the surface thereby intensifying the inflammation.

If the discharge does not contain the gonococcus, but diplobacilli, a zinc sulphate solution should be used instead of silver.

In the early stages of the disease, if the lids are not swollen, cold applications in the form of pieces of lint that have been laid on ice, may be of benefit in certain cases, if used intermittently for fifteen to twenty minutes at a time. They lower the temperature to a point where the growth of the gonococcus is retarded and they also give relief to the patient.

Cold packs, however, should never be applied except under the close and frequent supervision of the attending surgeon, as when used in unsuitable cases or when too long continued, they may cause vasomotor paresis, interfering with the circulation and lessening the resistance of the tissues, especially the cornea. For this reason they should never be used after the formation of pus or when the cornea is the least bit hazy. Warm packs are often preferable, especially in the later stages, as they stimulate the vascular and lymphatic circulation, thus enabling the leucocytes to make a better fight against the pathogenic germs of the disease.

Corneal involvement in these cases seldom occurs when early and proper treatment has been instituted. Unfortunately, few of these cases are seen by the specialist before the fifth day of extrauterine life, by which time the cornea has often already become involved. We must remember that the neonatal cornea is exceedingly vulnerable both on account of the extreme thinness of its epithelial layer and because there are no tears to protect it.

In many cases of gonococcal infection the conjunctiva immediately surrounding the cornea becomes so swollen and tense that it not only shuts off the nutrition of the cornea, but provides a cul-de-sac between the two membranes for the lodgment of pus which cannot be removed by irrigation. This is why corneal ulceration in these cases is almost invariably peripheral.

Scarification of the infiltrated conjunctiva making radical incisions through the entire depth of the swollen tissue and repeated on succeeding days as the chemosis returns is beneficial, followed by gentle irrigation with warm boric acid solution until bleeding ceases. If the lids are badly swollen causing tension upon the cornea or rendering free irrigation difficult, lengthen the palpebral fissure by doing a free canthotomy. It never leaves a scar.

The moment the cornea becomes involved, instil atropine, apply hot packs, and if the ulcer is well defined, carefully cauterize it with pure carbolic acid, tincture of iodine or trichloracetic acid. Personally I prefer carbolic acid for the purpose. An easy and safe method of applying it is to take an ordinary match stick of soft wood, one end of which is made round and smooth by rubbing it on sand paper. This end is dipped into the acid which is absorbed by the wood so that there is no danger of its running into the healthy corneal tissue or penetrating too deeply. The other end of the match stick is mounted with some clean, long fibred absorbent cotton. After thoroughly drying the ulcerated surface with the cotton tipped end, immediately reverse it and gently but thoroughly touch with the carbolized end all diseased corneal tissue, immediately flushing with boric acid solution.

Occasionally the disease is confined to one eye, in which case the fellow eye should be properly protected by means of a Buller's shield, by mica or by a bandage between the layers of which pieces of oiled silk are inserted to prevent any discharge from penetrating the dressing.

The child's arms should be confined and he should be made to lie on the infected side. To prevent infection of the mother's breasts, the mouth and face of the child should be cleansed before nursing and a clean bandage applied to the eyes during the time of nursing.

Whenever possible, these cases should be treated in a hospital and the nurse who handles them should have nothing to do with any other patient, especially operative cases. Both physician and nurse should wash their hands with an antiseptic soap both before and after handling these cases and they should also insist upon the immediate destruction or disinfection of all towels and other articles used.

Summary

Ophthalmia neonatorum may result from gonococcal infection when there has been no symptom or knowledge of the existence of this disease in the mother for years. It may be due to pathogenic organisms other than the gonococcus. It can invariably be prevented if proper prophylaxis is observed, and readily cured if early and proper treatment is instituted. Proper laws relative to the practice of midwifery should be formulated. Every physician who does obstetrical work

should make a special study of this disease. The general public, prospective mothers in particular, should be made acquainted with its dangers, methods and prophylaxis.

Relative to the treatment the following points should be remembered: first, the urgency of frequent irrigations; second, the proper use of nitrate of silver solutions; third, the necessity of using great caution in the use of cold packs; fourth, the necessity of absolute cleanliness both in regard to patient and attendants; fifth, the preference of hospital to home treatments; sixth, the necessity in monocular cases for protection of the unaffected eye.

1126 WALTON AVENUE

THE PREVENTION OF BLINDNESS

JOSEPH SHANKS, M.D.
Chicago, Ill.

Introductory and Historical

In our concern for the care of the eyes and the prevention of blindness we must bear in mind that up to date statistics reveal, according to many observers, that one out of 1227 persons is blind; that accidents, injuries or misfortunes of various kinds and disease continue to bring about much blindness; and that about seventy-two percent of the present blindness could have been prevented!

To everyone interested in ocular health, hygiene and vision, the questions are invariably something like these: What is meant by preventable blindness? What are the various or the principal causes of blindness? What diseases cause blindness? What results have come from refraction or eyeglasses in connection with ocular health and blindness? How do venereal diseases—gonorrhea and syphilis—cause blindness? Blindness due to cataract, glaucoma, retinal detachment, optic atrophy, trachoma, injuries, besides a host of other direct and indirect causes! It is therefore obvious that the scope of this paper is too great for any complicated detail and so as briefly as possible, I shall endeavor to touch on only the most important phases in connection with historical and modern ophthalmology as well as preventable blindness.

Turning back the pages of history to the days of Palestine, Egypt, Ancient Greece and Rome, one finds nothing but a continuous maze of superstition and ignorance. The old timers knew little about anatomy and nothing at all of the modern sciences of physiology, histology, pathology, bacteriology, chemistry, etc. When blindness came as a result of an injury or from opacity of the transparent media of the eye, the diagnosis was, of course, natural; but with the eye apparently without an ugly spot, without a blemish or obvious deformity, the disease became a puzzle and was often thought to be a curse from some of their gods.

History also reveals that the difference between the two formidable eye diseases—cataract and glaucoma—was a perplexing problem for many thousands of years. A new light was shed on this mysterious question in 1709, when the will of Dr. Boudelot, French court physician of Louis XIV, was complied with posthumously. His eyeballs were taken out, examined and studied for the investigation of their pathological findings! It was then and there that Brisseau, another French physician, discovered that the lens was not the seat of the trouble—what we now call glaucoma; but he failed to find the real source of the disease; he believed some disturbance of the vitreous to be the cause of this disease.

Dr. DeGrosz, a Hungarian physician, points to Fabini, a professor at the University of Pest in 1831, whose motto in connection with glaucoma was "prognosis of glaucoma is extremely grave," but nevertheless pointed to a fact that suggested what we now call the real thing—the elasticity of the eyeball becomes as "hard as stone". McKenzie, of Glasgow, also pointed to the hardness of such an eye in 1830. Later in that century (1851) Von Helmholtz invented the ophthalmoscope which revealed the interior of the eye. Helmholtz's dream and prophecy became more than real; his instrument solved the problem of simultaneously illuminating and viewing the interior of the eye; and although the instrument employed by him was crude and inefficient in certain ways, it comprised all of the principles of the modern science of ophthalmology. Still later (1856) Albrecht von Graefe discovered that the surgical procedure known as iridectomy offered absolute relief to the glaucomatous eye; and from then on progress in ophthalmology has been very real and very great.

Principal Factors in Preventable Blindness

A discussion of preventable blindness would not be complete without some mention of ophthalmia neonatorum. This infectious eye disease due to gonorrhea was among the destructive factors in causing needless loss of eyesight until not so long ago. Before World War I we had about sixty-four thousand registered blind persons in the United States (according to some, about one hundred thousand). Of these about ten percent were blind as the result of ophthalmia neonatorum. Such statistics were given us before the advent of the compulsory silver nitrate treatment law! The same goes with the present day trachoma treatment by means of sulfa drugs. The same may be said of our increased knowledge in refractive errors in connection with preventable blindness, especially myopia; and the same goes for the modern studies of heredity and nutrition in relation to these problems.

All in all, progress in ophthalmology in this century has been quite spectacular; but of chief interest to the man in general medical practice, as well as the lay public, is the progress made, 1, in the management of eye injuries (industrial or otherwise); 2, in the treatment of cataract; 3, in the treatment of glaucoma; 4, in the treatment of detachment of the retina; 5, in the studies and treatment of optic atrophy; 6, in the management of cross eyes and their surgical procedures; 7, in the study and treatment of certain cranial tumors and conditions involving the optic nerve.

And so after a consideration of this important classification on the subject, I shall do my very best to describe in the briefest manner the principal points on so vast a field.

Light and Serious Injuries to the Eye

Foreign bodies, such as particles of steel, copper, iron, etc., or splinters of wood or stone often enter the anterior chamber or become fixed in the iris after having penetrated the cornea. Many of us have heard or seen cases where foreign bodies became lodged in some portion of the iris or in the angle of the anterior chamber and were tolerated for years without the slightest discomfort to the patient. Far more frequently, however, such conditions give rise to serious inflammatory reaction with involvement of the ciliary body and far reaching complications. In serious cases, if enucleation of one eye is not performed in due time, a sympathetic ophthalmia may occur and the loss of both eyes may be the tragic result. This does not mean that every case of foreign body in the eye (due to particle of dust or eyelash) which comes to the attention of the average physician in the course of his daily office practice is the real thing; I mean real cases brought about by accidental injury in industrial plants or other important accidents.

Next to foreign bodies the treatment of wounds is to be considered. Wounds caused by blows, contusions, projectiles and other eye injuries of not too violent a nature may heal without leaving a trace of visual disturbance. On the other hand, a rupture in any of the tissues may bring about serious involvement in other vital parts of the eyeball. According to Fuchs (1), if a portion of the tunic or ciliary body projects into the wound, it should not be removed because the vitreous may be caused to prolapse. Careful suturing of the exposed tissue, especially if the sclera is wounded, may result in good healing. However, more serious is a wound due to some violent contusion and followed by a hemorrhage.

In the treatment of serious injuries to the eye brought about by burns, a real service may be rendered in connection with preventable blindness by the prompt application of suitable measures and common sense in such cases. Superficial and deep burns and scalds may be caused by alkalies, acids, electricity, sunlight, molten metal, etc. Among the most important acids so injurious to the eye are, of course, sulphuric, muriatic, nitric, acetic; and among the important alkalies are potash, soda, ammonia and lye. Such chemical agents in a world of automobiles, storage batteries, refrigerators, porcelain cleansers, etc. will often cause accidental injuries of far reaching proportions.

Perforation of the eyeball will result from trauma of the sclera and cornea, and vision or even the eye itself will be lost. Then we have burns to the conjunctiva which may bring about complications of the lids, of the cornea and sclera—often a serious matter. Frequently burns are caused by the action of steam, gas flames, alcohol flames, heated water or coffee, boiling oil, etc. A good deal depends upon the patient's intelligence as to first aid, proper medical attention and speed for such attention. Vision or the condition of the eye may often depend upon the proper neutralizing agents—for instance, in the case of acids, a weak solution of sodium bicarbonate and washing away the excess chemical will often be a good start; alkalies, as lime, soda and potash, by thorough cleansing and the application of bland, sterile oil, preferably animal or vegetable oils which saponify with the alkalies, and not mineral oils.

Cataract

A field in which real progress has been made in this century is that of cataract surgery. The literature on the subject—diagnosis, methods of examination, technique—is already enormous. However, the present modus procedendi is adequately analyzed by Knapp in a series of cases (3) after intracapsular extraction. He gives an interesting resumé of his technique, the important step of which is the use of the capsule forceps, of which I myself make use. While many oculists practice the intracapsular method, many others still adhere to the extracapsular technique. Then we have the extraction of a cataractous lens by the vacuum method —praised very highly by some and frowned upon by others. According to observers from the literature of not so long ago, cataract still holds first rank as a cause of blindness and after sixty or sixty-five years of age is responsible for over one-third or 34.1 percent of all cases of blindness.

Glaucoma

No real scientific progress has been accomplished in the field of etiology; and the theory most generally accepted for the last several decades still stands. In its surgical technique on the other hand, a good deal of progress has been made. The recognition during the past years of the fact that glaucoma is essentially a surgical disease, or at least from a proper appreciation as to when a case no longer responds to medical methods and is immediately given over to surgery for the purpose of saving vision, should be recorded as true progress in the management of this formidable eye disease. The Elliot trephine operation (described by Colonel Elliot of England and performed in the United States more than twenty-five years ago) is yet the method chosen by many eye surgeons today. The iridectomy and iridotasis operations are equally lauded by others. In a paper published about the treatment of eye conditions in India, Shetti (10) reports some of the treatment methods employed in glaucoma at Henderson Eye Hospital (Bijapur, India, District of Bombay). Eserine and drops of epinephrine are first given, and then iridectomy is performed in acute cases; trephining is done in chronic cases. High tension is treated by an intravenous injection of one and five tenths percent solution of sodium chloride; a half pint is given at a time. Treatment with pilocarpine (two percent solution) has quite a following in the United States. All in all, glaucoma is a great factor in the production of blindness.

Optic Atrophy

The great majority of such cases are, of course, postneuritic—that is, following some inflammatory process of the optic nerve. Treatment of this condition must be directed to the fundamental cause which I believe to be syphilis, septic tonsillitis and pyorrhea. Of the brain diseases which are an etiological factor in optic atrophy, according to some, disseminated sclerosis, progressive paralysis, and other conditions might be mentioned. The principal disease of the spinal cord, locomotor ataxia, is also a prominent cause. Mechanical obstruc-

tion from tumors, injuries, embolus in the arteria retinae centralis, and toxic agents causing retrobulbar neuritis—all lead to optic atrophy. As a direct factor in the causation of blindness this disease stands high.

Detached Retina

This affliction is still a formidable cause of total blindness. Many surgeons are quite impressed and enthusiastic about the socalled Gonin and Guist surgical technique. These procedures came from the idea of using the thermocautery—the electrocoagulation of the choroid—for a number of years a popular operation in ophthalmic practice for retinal separation.

Cross Eyes

There is still a lot of nonsense written and believed about squint and heterophoria. However, much has been accomplished by the more studious of the profession during the last twenty years in this connection. Lancaster (7) has given some interesting points on the anatomical and physiological consideration of squint and heterophoria. For instance, the rectus eye muscles are a little over forty mm. in length; the obliques, like the inferior, are a trifle shorter, while the superior is somewhat longer; but if we consider the length of the tendons, all the muscles come to the same measure more or less—about thirty-six mm. Observers believe that these muscles are able to contract or have the power to contract one-third. Such contraction means about twelve mm. as the most advanced excursion in any direction from the principal seat of which the muscles have such capability. So, if a muscle brought the eyeball through an excursion of twelve mm. it would amount to an equivalent of about 60° (maximum rotation is about 45° to 50° according to scientific estimates). Then it must be remembered that the eyes do not go over 50° or 55° not due to muscular deficiency, but due to the action of the check ligaments.

The erroneous belief still exists that one can measure the strength or capacity of an eye through the maximum rotations by means of an instrument; and that muscles could rotate the globe farther if not prevented by the check ligament, not by the socalled weakness. Why the muscles rotate the eyeballs so well in some directions and so badly in others is really no mystery. Nature has amply provided the rectus externus of one eye and the rectus internus of the other eye with the proper nerve supply for the conjugate movements to the right or left. The same may be applied to the other conjugate movements—elevation and depression. But far different are those movements which we term disjunctive; for we find no proper provision, even for convergence. The way the eyes function in heterophoria is by their ability to compensate—disjunctive compensatory movements. Healthy eyes without muscular defect have no need for disjunctive movements. Hence nature has failed to make the necessary arrangement properly for better functioning. However, in spite of all that is said and done, from a therapeutic viewpoint, we have enough evidence in many cases that by repeated and persistent exercise (prisms—orthoptics) these defects can be much improved or cured, as many other conditions of a paradoxical nature—as so many different compensatory laws we often come across in various problems relating to different parts of the human body.

Certain Cranial Tumors Involving the Optic Nerve and Vision

On examining the literature on tumors or neoplasms involving the visual tract, one is impressed by the fact that so many clinicians and investigators have made the discovery during the past years of an increasing number of pathological conditions which involve the optic nerve. Involvement of the optic nerves and chiasm, as most of us know, will give rise to visual disturbances, optic atrophy and perimetric field defects. In fact, the discovery of this fact and studies on the subject have probably constituted one of the most important advances in knowledge of the pathology, diagnosis and treatment of lesions about the optic chiasm, according to some. In a fine paper on the subject (14), Heuer and Vail state: "Following the reports of Marie and Fröhlich concerning the association of pituitary tumor with the clinical pictures of acromegaly and dystrophia adiposogenitalis, respectively, the attention of clinicians and surgeons was focused on these tumors, and in their diagnosis certain signs and symptoms were more or less insisted on. These included "sellar" headaches, subjective visual disturbances, primary optic atrophy, bitemporal hemianopia, an expanded sella turcica, with or without destruction of the clinoid processes, and metabolic disturbances indicated by acromegaly or Fröhlich's disease."

The same authors again state: "Later it was recognized that pathological conditions other than primary hypophyseal tumors may involve the optic chiasm, among which the suprasellar craniopharyngiomas, the suprasellar and parasellar meningiomas in their earlier stages at least, not only might not be associated with glandular symptoms but might occur in the total absence of any abnormalities of the sella turcica as seen in the roentgenogram. Their characteristic clinical features are now recognized to consist of visual disturbances, primary optic atrophy and bitemporal visual field defects, a group of symptoms to which Cushing applied the term 'chiasmal syndrome'. Therefore, primary optic atrophy alone, in the absence of any other clinical manifestation of disease, may be a positive indication for operation directed toward the relief of pressure on the optic chiasm and nerves."

The statements quoted above may or may not sound too radical and the question about surgical indications in such conditions may be affirmed or denied, but the experience of many a surgical man is overwhelmingly in favor of the mechanical cause of optic atrophy and blindness, whether due to direct pressure on the optic chiasm or to previous choked disk.

Conclusions

Attention is called to several outstanding features in connection with the prevention of blindness:

1. The importance of early examination, correct diagnosis, refraction and proper eyeglasses in such cases as cross eyes, hyperopia, myopia and astigmatism.

2. Seemingly trivial conditions produced by injuries should never be left to chance; careful check and proper medical measures are things to be depended upon.

3. Aside from surgical methods for the removal of cataracts, in glaucoma, etc., is the recent astonishing contribution of Dr. Filatov of Russia on corneal grafting—a new method for restoring eyesight to those hopelessly blind—a procedure for corneal transplanting

from the dead! From time to time a real contribution is made to ophthalmology which results in the preservation or restoration of vision, or methods in new diagnosis or surgical technique. Thus, within less than a century Helmholtz had given us the ophthalmoscope; Parent brought out the retinoscope; Schiotz, the tonometer; Gullstrand, the slit lamp. In surgery, Daviel devised the cataract operation; VonGraefe, iridectomy; Eliot, corneoscleral trephining; Gonin, technique for bringing vision to those completely blind from detachment of the retina.

Operations upon the cornea, especially in complete corneal opacities or across the pupillary zone, were always looked upon as hazardous and hopeless. Several research workers in the past attempted corneal grafting with more or less failure. Present day surgeons have better results than those of years ago. Why? Because there is no longer the difficulty in understanding that grafts from the eyes of animals will never do because of blood type and heterogeneity. These points were not understood years ago as plainly as we understand them now (thanks to the science of transfusion). Human donors were unwilling and difficult to obtain, and when obtained the results were usually bad—because of blood type or some pathology. So the procedure advanced by Filatov is the employment of human eyes taken from persons who were accidentally killed or died from a surgical operation. Such eyes as appear to be in good physical condition are enucleated within five hours after death and sent to the laboratory for tests. The specimens are then put in an air-tight receptacle and placed for one to three days in a refrigerator in order to allow sufficient time to obtain the necessary laboratory tests and study of the donor's eye. From reports we learn that Filatov prefers such eyes to those of living persons. He is quoted as not wishing to make use of live donors even had he the opportunity to do so.

4. The conservative management of inflammation and eye infection by means of sulfa drugs, etc., is based on physiological, clinical and pathological considerations which are, of course, in general acceptance at the present time throughout the world.

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3109 North Lincoln Avenue

THE EYES OF PILOTS IN NIGHT COMBAT

M. MARTYN KAFKA, M.D.
New York, N.Y.

Few people can actually visualize the degree of speed the aeroplane is forced into during air combat. Split seconds spell the difference between life and death. The roar of motors and the sharp crackling sounds of aircraft guns intermingled with the land-based antiaircraft fire produce a conglomeration of deafening sounds sufficient to raise nervous tension to the breaking point in any iron-fisted flier.

Air battles at night have many problems, some of which are rarely encountered during the intensity of battle of day missions. Aside from being able to gauge the speed of enemy planes during the night there are such conditions as night landing, take-offs and accurate target firing—maneuverability of aircraft in extremely high altitudes to lower altitudes in "dog fights"; and most important of all, is the ability to see accurately when the aircraft is moving at colossal speed under blankets of darkness and rapid cross gunfire.

In one of our bombers, there may be more than one casualty and the rest of the crew sorely handicapped, while at its tail may be several enemy ships trying to give the already partially bullet-ridden aircraft the final death blow. It is under such conditions that the flier's and navigator's eyes play an important rôle. When grave danger threatens to annihilate both the crew members and the pilot in night flying battles, it is at such times that perfectly functioning eyes play a major part.

Most significant in night flying is the ability to see in darkness. When a pilot begins to complain that he cannot see accurately at night he is suffering from the early stages of "night blindness". This condition is due to absence of sufficient vitamin A intake especially in the daily diet. In the early stages of night blindness the pilot may fail to fulfill his mission under conditions of combat.

Vitamin A deficiency may produce decreased ability to adapt oneself to darkness. Under such circumstances, the alert flight surgeon tries to see that his men receive adequate vitamin A intake during the course of the weekly diet. I have always advocated the use of vitamin therapy when the diet is inadequate, and when there is an insufficient variety of food, it is a good policy to use vitamins through medication.

A speed of 360 miles an hour in combat is equivalent to six miles a minute and about one mile in ten seconds, travelled while moving under such conditions with enemy flying almost equally as fast. The flyer's skill plus expertness of judgment executed in these seconds may often mean saving an entire bomber crew from death.

The visibility at night is gauged by candle power

and, during combat, may vary from zero to 0.025 during starless moonlight missions. However, when the stars and the moon are out, the candle power may be somewhat higher.

In the heat of concentrated night combat, dark adaptation is an individual process in each eye. Furthermore, in trying to adjust to darkness, it takes approximately twenty-five minutes under combat conditions. Some pilots have learned to close one eye in order to preserve the ability to adjust for dark adaptation. Nevertheless, dark adaptation may be lost by sudden exposure to instrument lights or flash lights used to read charts, maps, flares sent out by enemy planes or exposure to land searchlights. At times, antiaircraft fire or tracer gun fire may cause loss of dark adaptation.

Many pilots have learned from combat experience that it is best not to try to fix centrally while attempting to sight enemy aircraft. Fliers feel that when they gaze indirectly upon an oncoming plane, they can more accurately judge gunfire and enemy speed. Flight surgeons have analyzed this fact and have concluded that when an aviator looks partially away from the oncoming plane that the image falls on the sensitive rods of the retinae. There have been instances when an observer spotted enemy speeding aircraft in almost pitch darkness but suddenly lost sight of it. This phenomenon occurred because the image of the aeroplane stimulated the less sensitive cone cells of the retinae of the pilot's eye.

Experience teaches that unusual types of aircraft cannot be observed over about 1200 feet. It is for this reason that fliers have learned by practical observation in night combat to follow the enemy plane either from above or below while maneuvering for position. To follow an enemy speeding aircraft just in front of a plane or directly behind produces but a vague retinal image; and so there is a likelihood of losing sight of the enemy plane. When an aviator anticipates being called on a night mission for combat, either for piloting a bomber or sitting at the controls of a fighter plane, it has been recently learned that it is best to adapt the eyes to the dark by using a soft red lighted room. It is not practical to sit in a totally dark room. The delicate little rod cells of the retinae of the eyeball is not sensitive to red-tinted light. There have been times when it was even practicable to use red lenses placed in light-proof goggles. Thus the night pilot can rest the rods of his eyes while the cones become adapted. Some fliers have employed red lights for their dash boards. This procedure tends to eliminate the possibility of being easily detected by enemy fliers.

Experiments conducted in the past have now proved that lack of a sufficient amount of oxygen before and during combat duty in high altitude flights may produce a marked decrease of sensitivity by the retinae. Experience has taught air squadron commanders that it is best to use oxygen even before the aeroplane leaves the runways. In difficult combat missions, where bombardment fliers must attack enemy installations, ammunition dumps and rail junctions, oxygen must be used for a given period before the take-off. This reserve of oxygen given before flight, builds up an oxygen reserve in the blood stream which helps to ward off bad functioning of the vision. Also, the pilot's depth perception is improved. The prolonged use of oxygen before and during the flight prevents, up to a certain degree, the development of anoxia as well as the bends (aero-embolism). Besides, preoxygenation helps to build up bodily efficiency as well as preventing premature fatigue. It has long been the rule in military aviation to use oxygen regardless how the pilot or crew members feel above five thousand feet for any given combat mission. With antiaircraft fire and enemy interceptors, the need to climb into high altitude ceilings is often urgent; and at times remaining in such high altitudes may be necessary for prolonged periods. Premature fatigue under combat conditions may be disastrous for all concerned; and besides, the military mission may, in addition, prove to be a failure as well.

Hence, proper rest and avoidance of fatigue before the take-off is essential. A balanced diet plus an adjunct of vitamin intake is important when a combat flight is contemplated. Skill alone is not enough under such adverse conditions. The human physiological processes must also be guarded equally as well as the fuel and ignition systems of the fighter and bomber planes.

During the course of a night air combat mission, the crew members have their respective responsibilities and often the condition of the acuity of each man's vision helps to maintain success or failure of the flight. The bombardier, the navigator and the gunners must adapt their eyes to darkness and any sudden exposure to light after attack is begun may bring on a delaying action for about a half hour—and the dark adaptation adjustment of each crew man may have to be started again; and this may occur at the time when the precision of an instantaneous attack may be necessary.

During combat, protective goggles which are worn by crew members help immeasurably to protect the vision from flares and exposure to extreme cold. Unprotected eyes in subzero weather may cause the eyelids to freeze thus causing blurring of vision. Every flier is equipped with a complete helmet which has all the essential accessories as goggles, earphones, microphone, oxygen mask and a headgear. In addition, a dark green colored flying suit made up of the best quilt material offers warmth and buoyancy to the pilot and the crew; and which is so essential for staying above the surface of the water in case of forced landing over lakes or rivers. The aviator's gloves, too, are made so as to fit the hands; and when necessary extra layers of wool are available when the temperature decreases to very low subzero weather in extremely high altitudes. At the same time, there is sufficient movement and dexterity of the hands when these gloves are worn so that the pilot can manipulate machinery, guns or the controls.

The aviator and his crew wear mukluks for protection of their feet. This type of overshoes, as is used by Arctic explorers, have been carefully designed to meet the needs of aviators. These are especially useful in weather of 60 degrees below zero and serve to give comfort and warmth to exposed feet.

In short, every modern advantage developed through science is utilized wherever possible for the safety of fliers and their crew members on every flying fortress.

502 PARK AVENUE.

Editorials

Rehabilitation Group Signs Off

Shortly after Pearl Harbor several flight surgeons and some other patriotically-minded members of Aviation Post 743 of the American Legion, all of whom had seen action in World War I, tried to get back into service. "Too old" was the authoritative reply to every applicant. The door seemed closed to all these men. Then the thought came to Dr. Samuel Meredith Strong, a general surgeon of Flushing, L.I., that here was a group of fine boys, with minor disabilities, many of whom would make excellent flyers; why not try to correct the defects and put them into the Air Forces? Without any "subsidy", and depending entirely upon voluntary contributions, Dr. Strong set up the American Flying Services Foundation with offices in the Medical Chambers, 140 East Fifty-fourth Street, N.Y. City.

There he received boys who had been "turned down" at induction centers, but who had a burning desire to get into the air division of Army or Navy. All sorts of conditions were met with, from hernias to deviated septums, but all of them were thoroughly remediable from a surgical viewpoint, and it is certainly a fine tribute to American initiative and persistence that some thirteen thousand young men were accepted after rehabilitation by the Foundation's surgeons. The chief expense was for hospital and nursing care. For the most part those who performed the operations took no fee, or a small one, "just enough to take the sin off" from any notion these boys might conjure up that they were receiving "charity".

At least one otorhinolaryngologist considered the opportunity to serve his country in this manner as a "life saver for me". He explained that he was so disheartened after a visit to Washington in an effort to obtain a "commission" that he thought of suicide! A son who had been decorated for gallantry in action while flying a fighter plane against the Japs, sharpened the desire of the father to "do something". The Flying Service sent in one hundred boys with ear, nose and throat defects who were revamped, so to speak, and were then given commissions in the Air Forces.

With the end of the war in Europe there comes a diminished demand for the training of new pilots, in fact, some who were about ready to receive their "wings" were demoted to "private" or "non-coms". This was unfortunate and fairly heartbreaking to many boys who had struggled to "make the grade", exacting as it is, but it could not be avoided. War is at best a wasteful business—a frightful waste of health, life and property. Let us have no more of it!

Even though the Flying Service has suspended activities, Dr. Strong, who has given endlessly of time, money, and energy to his "war baby" as he calls it, still has hope that in some way an opportunity can be found to rehabilitate veterans who may have been discharged from the air arm of Army and Navy, and yet who may be in need of help.

Our government has at hand no "decoration" for civilians who perform patriotic service of this sort. Isn't it about time that some one undertook to fill the gap and give recognition to those who so well deserve it?

The Health of Europe

The military war in Europe is finished but it seems likely that another war with high casualties will follow the military victories. It is hard for us here in this country, whose cities are intact and where there are adequate natural resources and foodstuffs, to realize what the actual situation is in Europe today. Many of the largest cities are destroyed, others severely damaged, transportation systems are badly crippled, the tilling of the soil is heavily neglected as a result of a shortage of manpower and inability to make planting due to hostilities which were in these particular vicinities. Industrial and mining enterprises have been overtaxed and crippled, while millions of Europe's population have been displaced and will try and find their way home. Most of western Europe is not in a position to be self-sufficient in foodstuffs. The whole thing is a frightful mess and we are fearful that the four horsemen will ride through Europe with more damage than has ever before been seen.

After most wars wounds heal slowly, but we are of the opinion that the aftermath of this war will be more calamitous than ever before. Disease, epidemic, hunger and suffering are inevitable. Naturally, we in this country will do all that we can to alleviate the distress and help in every way possible, and the help should naturally go to those who are deprived of their foodstuffs and livelihoods by the greedy and vicious followers of Hitler. They should be charged not alone with the destruction and casualties of the war but with all the terrible consequences which are going to follow in the aftermath.

We could do a great deal more to help matters but we still have the burden of defeating our more vicious enemies in the East. While many of us are elated that the war in Europe is finished, we still have the tremendous responsibility of doing what we can to help rebuild a semblance of civilization in Europe and to destroy the military might of the Japanese who have no semblance of civilization. We must do this in an effort to alleviate hunger and prevent chaos and disease from ruling most of the civilized world.

Iodine and Disease

Iodine is one of the most valuable therapeutic agents in the physician's armamentarium. It is present in food but only in small amounts, mainly in fish, and it may be that the many virtues of cod liver oil are largely due to its iodine content. Iodine has a highly specialized function as an "activator" of the various glands whose proper functioning is essential to normal metabolism and to protection against disease. The quantity of iodine varies enormously in different soils and therefore in the foodstuffs. Where the soil is depleted of iodine or where there is a natural deficiency of the mineral, glandular affections increase and the incidence of goiter is extremely high. Marine studied and explained the pathology of swellings of the thyroid gland and introduced in this country the prophylactic use of sodium iodide with satisfactory results. The Swiss Goiter Commission recommended the use of iodine.

It is difficult to explain its mode of action. It has been found that some persons cannot tolerate the minimal official doses, while minute doses act equally well. In short, the personal equation enters into the question, and iodine acts not as a drug but as a natural activator. It is employed in the treatment of syphilis and as an expectorant.

News Items

Harvey Lecture.—The eighth Harvey Lecture, on "Ultrastructure and the problem of cellular organization", was delivered at the New York Academy of Medicine on Thursday evening, May 17th, by Francis O. Schmitt, professor of biology and biological engineering at the Massachusetts Institute of Technology.

Research on Peripheral Circulation and Shock.—Dr. Carl J. Wiggers and his associates in the department of physiology of Western Reserve University, Cleveland, Ohio, have received a grant of $8,200 from the Commonwealth Fund to be used for a continuation of their studies during the coming year on peripheral circulation and shock.

Evolution of the Human Brain.—The James Arthur Lecture on the evolution of the human brain, sponsored by the American Museum of Natural History, was delivered on April 30th by Dr. K. S. Lashley, research professor of neuropsychology at Harvard University and director of the Yerkes Laboratories of Primate Biology. His subject was "Neural correlates of intellect."

Course in Public Health Nutrition at the University of Brazil.—A series of new courses in public health nutrition will soon be initiated at the University of Brazil, according to a plan worked out by Dr. Benjamin Albagli, associate professor at the University. These courses will form a part of Brazil's campaign for the improvement of nutritional standards, and will be offered on the postgraduate level to physicians and medical students and on the undergraduate level to nurses.

California Medical Association.—At the seventy-fourth annual meeting of the California Medical Association held in Los Angeles on May 6th, the following officers were elected: president, Philip K. Gilman, M.D., San Francisco; president-elect, Sam J. McClendon, M.D., San Diego; E. Vincent Askey, M.D., speaker, and L. A. Alesen, M.D., vice-speaker of the House of Delegates.

From a Philippine Prison Camp.—Lieutenant Emmet L. Manson, Dental Corps, U.S.N.R., was the first Naval officer of those released from prison camps in the Philippines to reach the United States, according to *The Military Surgeon*. Lieutenant Manson was on duty at the Naval Station at Olongopo when war came. He was ordered first to Bataan and then to Corregidor where he was wounded before the fortress fell. He spent a year in Bilibid prison and then was sent to the camp at Cabanatuan. He worked as prison dentist and in the fields. He was suffering from the effects of beriberi when rescued by the Ranger forces.

Kober Lecture.—The 1945 Kober Foundation lecture was delivered in Washington, D.C., on March 28th by Captain Lloyd R. Newhouser, M.C., his subject being "The rôle of whole blood plasma and plasma fractions in war medicine". Dr. George M. Kober, founder of the lecture, was for many years dean of the Georgetown University School of Medicine. Captain Newhouser was presented with an honorarium of $500 by Lawrence C. Gorman, S.J., president of Georgetown University, who stated that the selection had been made this year by the Association of Military Surgeons of the United States. Vice Admiral Ross T. McIntire, Surgeon General of the Navy, presided.

Prize Competition.—*The Modern Hospital* has announced a competition for an essay on "A plan for improving hospital treatment of psychiatric patients". Three prizes will be awarded: first prize, $500; second, $350; third, $150. The judges will be three outstanding authorities on hospital treatment of psychiatric patients. They will be drawn from the Public Health Service, the American Psychiatric Association and the National Committee for Mental Hygiene. The competition is open to anyone except the judges and employes of *The Modern Hospital*. Essays should be sent to the Managing Editor, The Modern Hospital Publishing Company, 919 North Michigan Avenue, Chicago 11, Ill., and must be received not later than October 1st. Names of the winners will be announced on December 31st. For complete details regarding the competition write to The Modern Hospital Publishing Company.

Affiliation of Premedical Fraternities.—On April 29th, Sigma Alpha, premedical fraternity of the University of Louisville, became affiliated with Alpha Epsilon Delta, national honorary premedical fraternity, upon their installation as the Kentucky Alpha chapter. The initiation of eighteen active and three honorary members was conducted by Dr. Hugh E. Setterfield, associate professor of anatomy, School of Medicine, Ohio State University, and national president of Alpha Epsilon Delta. At the installation banquet, Dr. Setterfield gave an address on "What kind of doctor?" in which he emphasized that a broad liberal college education was the best preparation for the study of medicine. Among the guests were Dr. E. W. Jackson, president of the University of Louisville, and Dr. J. J. Oppenheimer, dean of the College of Liberal Arts.

Increased Incidence of Poliomyelitis.—According to reports from the U.S. Public Health Service, up through March 31st, a total of 453 cases of poliomyelitis had been reported this year, as compared with a total of 295 cases for the corresponding period last year.

Ricketts Prize Award.—Maurice R. Hilleman, Ph.D., New Brunswick, N.J., has been awarded the Howard Taylor Ricketts Prize by the University of Chicago, according to the *J.A.M.A.* The presentation of the award took place on the thirty-fifth anniversary of the death of Dr. Howard Taylor Ricketts, who died of typhus May 3, 1910, while conducting research on the disease in Mexico. Dr. Hilleman was given the prize for developing a way of making an antiserum of value in identifying a recently discovered group of viral agents. The viruses which he studied cause diseases in both animals and man and include the agents of psittacosis, lymphogranuloma venereum and atypical types of pneumonia. His investigations resulted in the discovery of a more efficient tool for identifying the viruses of this group.

Personal.—Dr. Walter B. Cannon, George Higginson professor of physiology emeritus, Harvard Medical School, has been elected a member of the Mexican Society of Natural History. Dr. Cannon is at present in Mexico City, where he is doing research work at the National Institute of Cardiology.

Dr. Irvine McQuarrie, professor of pediatrics, University of Minnesota Medical School, has been appointed editor of Brennemann's *Practice of Pediatrics,* published by W. F. Prior Co., Hagerstown, Md.

Dr. George E. Burch, associate professor of experimental medicine, Tulane University School of Medicine, New Orleans, Louisiana, has been appointed civilian consultant to the Surgeon General for diseases of peripheral blood vessels with particular emphasis on trench foot and allied conditions.

Dr. Norman H. Jolliffe has been named chief of a city-wide nutrition clinic, recently established at the Lower East Side Health and Teaching Center, New York.

Dr. Fred S. Eveleth, Concord, was elected president of the New Hampshire Roentgen Ray Society, recently organized for the purpose of improving radiological service in the state.

Dr. John F. Owen, superintendent of the Raleigh, N.C., State Hospital, has been placed in charge of the new mental hygiene bureau in the health department of the District of Columbia.

William B. McNett has been appointed art director of the medical and surgical division of the Blakiston Company of Philadelphia, according to a recent announcement by the company. Mr. McNett was formerly assistant in the department of art as applied to medicine at Johns Hopkins Medical School, and director of the department of medical art, Temple University, School of Medicine, Philadelphia. He has illustrated a number of text books and assisted in the illustration of others.

Dr. J. Shelton Horsley, surgeon-in-charge of St. Elizabeth's Hospital, Richmond, Va., has been elected a corresponding fellow of the Medical Society of London. This society was founded by John Coakley Lettsom in 1773 and is the oldest institution of its kind in England.

Medical News from Switzerland.—Some time ago the physicians of the Canton of Neuchâtel approached the cantonal government with a project for the x ray examination of the entire population of Neuchâtel and for the establishment of a health register. So far all school children of Neuchâtel have been x rayed and it has been decided to submit also the adults to the same examination. This work has already begun in La Chaux-de-Fonds. These precautionary measures will do much to spot possible dangers while they can still be averted or cured.

News has also come from Switzerland that a laboratory has just been founded in Lausanne which specializes in the preparation and conservation of pathogenic microbes common to man, animals and plants. This institution which will operate in connection with the Institute for Hygiene and Bacteriology will have the collaboration of both Swiss and foreign scientists.

Samples of various microbes will be sent to scientists in all parts of the world who need such specimens in their research work. A detailed catalogue of the samples available will be prepared. The Swiss Academy for Medical Sciences is patronizing this laboratory. Dr. Hauduroy, professor of medical sciences, has been appointed director.

Medical Personnel in the Mediterranean Theater of War.—As of February 28, 1945, there were fifty U.S. Army hospitals in the Mediterranean Theater with a total bed capacity of 37,525, of which 22,951 beds were occupied. The installations included twenty-five station hospitals, eleven general hospitals, seven evacuation hospitals, six field hospitals and one convalescent hospital. Medical officers assigned to the theater totaled 2,341, dentists 526, nurses 2,418 and Medical Administrative Corps officers 843. This gave an average of 4.6 doctors and 4.7 nurses per 1,000 assigned theater strength. At the peak of the theater's responsibility, in August 1944, when both the Italian campaign and the invasion of Southern France were under its control, the number of doctors totaled 3,955, dentists 748, nurses 4,075 and M.A.C. officers, 1,027. Medical supplies for the theater, ranging from atabrine tablets and hypodermic needles to sterilizers and surgical trucks, totaled 141,085 tons as of the close of March. The total tonnage of medical supplies shipped into the theater by years was: 1942, 4,050 tons; 1943, 70,498 tons; 1944, 51,977 tons and 1945, 14,560 tons.

Colonel Sams Awarded Typhus Commission Medal.—Colonel Crawford F. Sams, GSC, chief of the planning branch, Supply Division, G-4, has been awarded the United States of America Typhus Commission Medal. His citation declares that Colonel Sams "rendered distinguished service from January to August 1943, in connection with the work of the United States of America Typhus Commission. As Chief Surgeon at headquarters of the United States Army Forces in the Middle East, he aided the Commission personally and administratively in establishing its first Field Headquarters at Cairo, Egypt. He assisted in the organization of the Commission's early studies of typhus control in Egypt and put at the disposal of the Commission, essential facilities for all of its investigations. During the critical period of the initial activities of the Commission in his theater of operations overseas, Colonel Sams contributed sound advice. His assistance was a direct aid to the advancement of typhus control."

Doctors' Letters

SOLOMON R. KAGAN, M.D.
Roxbury, Mass.

The publication of letters written by outstanding men usually has a literary, historical, or biographical value. They mostly reflect the author's personality and characteristics, and as a rule offer pleasant reading.

I have in my files over two thousand original letters written by eminent American and European physicians. A great many of them contain interesting medicohistorical data. A small part of them I have published in my previous book, *Leaders of Medicine,* and in MEDICAL RECORD for the past three years.

The following seven letters were written to Dr. Fielding H. Garrison by outstanding American and British physicians and medicohistorians and deserve to be recorded in the medical press.

From Dr. Henry M. Hurd

Baltimore, May 22nd, 1916.

Dear Dr. Garrison:

Please excuse my employment of a stenographer. I am due downtown in ten minutes and it will take about twenty if I walk. Many thanks for your kind words about *The Institutional Care of the Insane.* I am glad you like it and I hope you will like it better the more thoroughly you look into the book. It is in many respects of course perfunctory, but at the same time it has required the writing of several thousand letters and much effort to collect the material. I enclose a circular which will give you an account of the contents of the remaining volumes. I am sorry to say, however, that the other volumes promise to be considerably larger than the present one.

I thank you very much for your kind suggestion that you are willing to review the book for one of the journals. If you have time to do so—and I wonder if you have—I should be glad to have such a review written. As to where it should go I leave that entirely with you. Probably the *Boston Medical and Surgical Journal* would be a good place, or the *Journal of the American Medical Association.* But wherever you desire to send it will be entirely satisfactory to me.

With kind regards,

Henry M. Hurd

* * *

Baltimore, May 8th, 1917.

Dear Dr. Garrison:

Your letter of the 3rd to Dr. Boggs has been shown to me. I am very much gratified to know that we can have you on the night of May 14th to give your interesting paper before the Historical Club.

I write to ask whether it will be practicable for you to dine with me that evening before the meeting. The hour must needs be early, say half-past six, because the Historical Club will meet at eight-fifteen. If you can come I want to have a few friends to meet you, but I will not make any arrangements until I learn definitely from you.

With kind regards,

Henry M. Hurd

* * *

Baltimore, Oct. 10th, 1917.

Dear Dr. Garrison:

Your letter of yesterday was received, and I acknowledge the same with thanks. My object in writing is to say that it will not be practicable to outline the policy of the Historical Club until we have a meeting, which will probably occur the latter part of this month or the early part of November, and I can then know what may be done. I wish, however, in the meantime, to express my sincere thanks for the pains that you have taken. I hope that we may be able to secure a certain number of historical papers, which will be of service to the Medical Corps, and of great interest to all medical men.

With many thanks,

Henry M. Hurd

From Dr. William S. Halsted

Baltimore, June 11, 1917.

Dear Dr. Garrison:

You are really too kind. I shall have to be very ware of asking you to employ someone to do me a favor. Possibly I have told you this before apropos of one of the many kindnesses you have shown me.

I have a photograph of a large goitre over the mamma. In Alibert's time these huge goitres escaped the surgeon, but they could hardly evade him in these days; hence it is, I presume, that the goitres no longer have a chance to grow to such proportions.

I thank you very much for the reference to Alibert's *Nosologie Naturelle* and for the quotation from his chapter on "Thyreopraxia". Monkeyshines of the thyroid would be the translation of thyreopraxia, I fancy.

What a nuisance I must be to Col. McCullogh also. Dr. Welch's ethnological studies have convinced him that the Germans necessarily are barbarians. I find it very hard to illustrate my paper with portraits of Germans. Possibly I shall have to discard them.

W. S. Halsted

From Dr. Henry Barton Jacobs

Baltimore, March 1, 1921.

Dear Garrison:

I am perfectly delighted with your Anthology, and want to thank you and Casey Wood most sincerely for thinking of me.

Your "foreword" is charming, and the selection so far as I have gone are most worthy and interesting.

It was a happy thought of you to do it for the *Chief's* birthday, and I am sure he appreciated the thought and the idea almost as much as if he had seen the book itself.

I am particularly pleased to see that you have included Thayer's tribute to Osler—It's very fine and so true.

The Welch book will now soon be out—Dr. Halsted is inquiring who is best to bind the presentation copy for Dr. Welch—Have you a suggestion?

With kindest regards and warmest thanks,

Henry Barton Jacobs

From Dr. Harvey Cushing

Dear Fielding:

You are a kind fellow. I thought of getting off from Brickner's board in view of the advertisements—but from what you say I will of course stick and feel most apologetic for having taken such a misunderstanding view of B's efforts.

Alas! The big journal. I did my best with Packard *in re* the *Ann. Med. Hist.* but 'twas no use. Whenever I get a reprint from the same I groan. What can one do with 'em.

Yes, I've seen your 'Anatomie Illustration' and read it through, what's more. How I failed to write you about it I don't know. But then you can little know what a hectic life is mine. I wish I might recount to you the events of this day, for example, with a four hour life saving operation thrown in from 12 to 3 P.M. and no lunch. Funny those folks who talk about the academic, full time, little pay, plain living, and high thinking life. I've always noticed that when one of 'em has a relative who gets sick, they have less consideration for the time and anxieties and responsibilities of the 'practical' surgeon, whom they scorn at other times, than any other group of people. I've been trying to lift my feeble voice to halt others talk of the medical fundamentals—who would give the practice of medicine over the laboratory scientists, some of whom are Ph.Ds and forget that the individual sometimes gets sick. All this because my four hour job was on the . . . . brother of one of them with all the family waylaying me by phone, telegraph and on every corner. In fact, I'm temporarily the darling of the Ghetto. Basta! (not Boston).

HC

From Sir Thomas Clifford Allbutt

Cambridge, England, Dec. 7, 09.

Dear Sir:

I have only just now found time to read the two pamphlets you kindly sent to me some time ago. I have found both *most* interesting . . . May I express my admiration of the able way in which you have presented a most difficult subject in *both.*

Clifford Allbutt

Book Reviews

Backache

Backache and Sciatic Neuritis. Back Injuries, Deformities, Diseases and Disabilities. With notes on the pelvis, neck, and brachial neuritis. By PHILIP LEWIN, M.D., F.A.C.S., associate professor of bone and joint surgery, Northwestern University Medical School. Illustrated with 235 figures. Line drawings by HAROLD LAUFMAN, M.D., instructor in surgery, Northwestern University Medical School. Philadelphia: Lea and Febiger, 1943. Pp. 745. Price $10.00.

Pain in the back, usually described by the laity as in "the small of the back," is probably as old as human anatomy itself. Both causal and diagnostic factors have often been misunderstood; therefore, treatment has been less helpful than it ought to have been. It may be that osteopathy has done something to arouse the interest of orthopedists in this very special subject. Too often patients have drifted away, and have come back "cured" and enthusiastic. As Lewin says in his chapter on manipulation, there is nothing mysterious about all this. The surgeon ought to have sufficient knowledge of anatomy and physiology to perform any manipulation which is necessary and helpful. The spine bears a great and constant burden. It is made up of a series of bones which rotate upon each other, and are likely to get out of line and press upon nerves or muscles. In such a case, pain is often intense and unyielding to internal medication, pills or plasters. The exigencies of military training in this war are producing many lesions of the back, especially in paratroopers. "Spurling claims that the back problem is the most serious of all during the basic training period in the army." We can be sure that many discharged soldiers will come back into civil life with almost total disability from back injuries, and that earning a living is going to be difficult or impossible for them unless they submit to chair life and do light work with their hands. Therefore, "spinal specialists" are going to be in great demand. The subject is far from simple and calls for vast clinical experience. Reading a book like this is only a means to an end, in spite of its great basic value. Learning to do by doing is the essence of success in the field of backache.

Cancer Research

The Riddle of Cancer. By CHARLES OBERLING, M.D. Translated by WILLIAM H. WOGLOM, M.D. New Haven: Yale University Press; London: Humphrey Milford, Oxford University Press, 1944. Pp. 196. Price $3.00.

The pre-title page states that this text is translated from the original French and first published in an English edition with the aid of a grant made to Yale University by the Jane Coffin Childs Memorial Fund for Medical Research. In his preface the author, Dr. Oberling says that his book was born of a series of lectures delivered before the Cancer Institute of the Faculty of Medicine of Paris, and the Faculty of Medicine of Teheran. His intention is to bring to the general public as well as to medical students and physicians knowledge concerning the "trend of cancer research today".

Dr. Woglom has been deep in cancer research in New York all of his professional life, notably with the George Crocker Cancer Research Foundation. He is a student, laboratory worker, and has read widely the writings of others the world over.

No one need pick up this book with the idea that the cancer "riddle" is solved. In fact no ultimate solution is offered. The well-known three hypotheses are given, namely, the irritation, embryonal, and microbic or parasitic hypotheses. All arguments, for and against each of these are adduced, and one is left to make a choice if he can. It has been ever thus. In chapter 5, Dr. Oberling has set down the reasons for siding with those who believe that some "virus" is yet to be found as "the cause". He notes that some of his friends oppose him seriously and severely. It is rather surprising to find so many references to American investigators; even more than to any other group. We always expect that the Germans and French are ahead of us, or at least seem to be. We are spending millions, have spent millions of dollars to solve "the riddle" but not much on the whole has been accomplished in the past twenty-five years. The best that can be said is that young and overenthusiastic newcomers with a sure-fire idea will find, upon consulting the record, that the idea has been tried and found unworkable. But negative evidence is often valuable because it keeps random feet from treading the hilarious highway which leads to unsuccess. Is it not likely that basic discoveries in the allied sciences of physics and chemistry must yet be made before we get on the right road? So far we have been floundering for this very reason. Dr. Woglom has performed a labor of love very well indeed. A translator does a difficult task in any case. Too often his work and he are soon forgotten.

The Crystalline Lens

Cataract and Anomalies of the Lens. Growth, Structure, Composition, Metabolism, Disorders and Treatment of the Crystalline Lens. By JOHN G. BELLOWS, M.D., Ph.D., Assistant Professor of Ophthalmology, Northwestern University Medical School, Chicago. With 208 illustrations and four color plates. St. Louis: The C. V. Mosby Company, 1944. Pp. 624. Price $12.00.

If there is anything left to be said about this tiny organ it will, doubtless, appear in the next edition. But how the knowledge of the crystalline lens can be extended beyond what is here set down is and will remain a mystery. Seldom in any book can one find such exhaustive detail, such splendid attention to the *ultra*. It is overwhelming to reflect upon the years of study, observation and experience that have gone into the making of this great work.

The first fourteen pages are devoted to a "history of the crystalline lens". The second chapter discusses development, growth and regeneration. Concerning growth, there is "a mathematical consideration" of this factor, and some pages on "experimental embryology" in the lower orders and in mammals. Structure, composition, metabolism, developmental defects, and the changes which take place in the lens follow.

The latter half of the text is given over to cataract of which there are more varieties than one can well have expected. Cataract surgery has long held high place in the list of human "skills"; for upon its success future full enjoyment of life depends, and upon its failure darkness must forever remain. Therefore, it is interesting to turn to page 563, where the "complications of cataract surgery" are set down as general, local, late and rare, but the most dreaded, one may suppose, is postoperative infection with the loss, not only of vision, but of the eyeball itself, and extension by sympathetic ophthalmia to loss of the other eye as well. Even in the most skillful hands, and under the most rigid technique such eventualities do happen. Blind-

ness in young men from cataract or other injury is always common in war. It is probably the greatest tragedy for an otherwise hale and hearty boy of twenty to face forty or fifty years of darkness. Surgery may yet save some, but many will have to depend upon the other senses for "light". This book serves to emphasize the responsibilities of the "eye man".

Arthritis

Arthritis and Allied Conditions. By BERNARD I. COMROE, A.B., M.D., F.A.C.P., associate in medicine, University of Pennsylvania. Third edition, with 329 illustrations. Philadelphia: Lea & Febiger, 1944. Pp. 1359. Price $12.00.

The third edition of this important work has been brought thoroughly up to date—as late as August 1944. New chapters deal with penicillin, psychogenic factors in "rheumatism", association with tropical diseases, mistaken diagnoses, and advances in treatment. There is a discussion of Dupuytren's contractures, of the effects of climate, the differential diagnosis from rheumatoid arthritis and a "diagnostic digest" for study by the general practitioner. In fact, the book was written to help the "general man", but it has everything that anybody wants to know about the entire subject.

Although the beta-hemolytic streptococcus has been found rather consistently in most cases of rheumatic fever, it is not as yet accepted as the *specific cause.* In spite of the amazing "reports" of both our Army and Navy in regard to the importance of sulfadiazine as a preventive and remedial agent, and in spite of acute "sore throat" or upper respiratory infection preceding attacks of rheumatic fever, this book states that, "There is no specific agent for the prevention of rheumatic fever." But it also states that, "The prevention of rheumatic attacks is based mainly on the prevention of hemolytic streptococcus throat infections." Again, "Sulfadiazine prophylaxis on a mass scale greatly reduces the incidence of rheumatic fever."

Out of the experiences among troops in this great war there is coming a crystallization of thought as to the causes, prevention and cure of rheumatic fever as a precursor of crippling cardiac disease. That is truly one of the very great "advances of medicine" of all time. The sulfa drugs, especially sulfadiazine, have proved their value in this disease. In contrast, we have the statement that "penicillin has been tried in a series of thirty patients with acute rheumatic fever without any influence upon the course of the disease." While this series seems far too small to draw such sweeping conclusions, and further clinical experience with this mould is desirable, we may accept it for present guidance.

Internal Medicine

Internal Medicine. Its Theory and Practice. In Contributions by American Authors. Edited by JOHN H. MUSSER, B.S., M.D., F.A.C.P., professor of medicine in the Tulane University of Louisiana School of Medicine, New Orleans, La. Fourth edition, thoroughly revised. Philadelphia: Lea & Febiger, 1945. Pp. 1518. Price $10.00.

This fourth edition of Musser's *Medicine* is sufficient testimony of its value in fulfilling the original purpose of putting under one cover a short encyclopedia written by several authors of high standing who are teachers of medical students and also clinicians, keeping in mind not only the needs of students but the reference requirements of men in practice. This fourth edition required an additional one hundred pages to set down the "newer" material derived from experience with the sulfa drugs, penicillin, etc. War medicine comes in for its share in the consideration of diseases due to protozoa, insects, and conditions incidental to existence in the tropics.

Of the twenty-six chapters, nineteen are written by chiefs of various departments and clinics of medical schools. The material, therefore, is didactic, but none the less interesting and instructive, since the "practical" view is uniformly emphasized throughout the volume. In all there are four "parts" or divisions. The first deals with infectious diseases; the second with "systemic" disorders of the various "tracts" and the endocrines; the third has to do with nutrition, allergy, metabolism, and physical and chemical agents as causes. The fourth and final division takes up diseases of the nervous system and describes abnormalities of the mind, including neuroses. The war has produced new problems in the diagnosis and treatment of neuroses and psychogenic disorders and we can look forward to more to come, regrettable as this fact is.

Considering that thirty-three authors have written independently, the volume is surprisingly free from repetitions or overlappings. It is a solid and standard treatise on the very essence of the healing art.

Child Psychology

Child Behavior and Development. A Course of Representative Studies. Edited by ROGER G. BARKER, Stanford University; JACOB S. KOUNIN, University of Illinois, and HERBERT F. WRIGHT, Carleton College. First edition. New York and London; McGraw-Hill Book Co., Inc., 1943. Pp. 652.

This serviceable monograph covers the groundwork in child psychology. Each essay is an account of the procedures, results and conclusions of a particular investigation revealing not only the process of research but its final culmination. The selection of these studies by the editors is based on their outstanding merit and applicability to clinical child psychology. But the recording of the work of the chosen investigators was left to them individually without editorial interference. The result is a heterogeneous collection of contributions molded into homogeneous organization by outstanding workers.

The topics considered include: Research in child psychology, history and prospect; reflex activities in the human fetus; activities of newborn infants; development of prehension in infants; conditioned responses in human infants; mental growth during the first three years; language development in the preschool child; development of children's concepts of casual relations; growth in intellectual ability; the Stanford-Binet scales for measuring intelligence; intellectual development and rigidity; growth of the child as a whole; learning and maturation in identical infant twins; effects of preschool attendance upon intellectual development; foster-family resemblances in intelligence; intellectual growth of children in foster homes; mental and physical traits of a thousand gifted children; study of personality development; studies of children's fears; social behavior and child personality; play and substitute satisfaction; frustration and regression; domination and socially integrative behavior; social behavior of preschool children; evaluations of adolescent personality by adolescents, and so on. This is a valuable contribution and should be on the reserve shelf of everyone interested in experimental or clinical child psychology.

Reconstruction Surgery

Reconstruction Surgery of the Extremities. Lectures selected from the instructional courses of the Twelfth Annual Assembly of The American Academy of Orthopedic Surgeons, Chicago, January 23-24, 1944. Edited by JAMES E. M. THOMSON, M.D., Lincoln, Nebr. Ann Arbor, Michigan: Edwards Brothers, Inc., 1944. Pp. 568.

It is surprising how much "material" has been set forth in a two-day instructional session of this organization. The editor avers that he has worked on some eighty-five manuscripts which go to make up this book. Just how much any individual surgeon could absorb in this accelerated course is problematical. If he tries to read it all as it appears here, he must set aside many hours; for the text is voluminous. At first glance one seems to be reading typewritten text, possibly after the socalled "take-off" process, but the flyleaf states that it was "lithoprinted in the U.S.A." . . . Our Government has used a similar process in issuing translations from German publications.

Reconstruction surgery of the extremities is set down under four general heads: I: Bone reconstruction; II: Joint reconstruction; III: Regional reconstruction (hand and foot); IV: Reconstruction of soft tissue defects. It is impossible to given even an inkling of the vast amount of experience here recorded. Each author is a high-grade specialist in bone, joint or soft tissue surgery. Several of them are still working with our armed forces under commission in Army or Navy.

Physical Medicine

Physical Medicine in General Practice. By WILLIAM BIERMAN, M.D., attending physical therapist, Mount Sinai Hospital. With 310 illustrations. New York and London: Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers, 1944. Pp. 654. Price $7.50.

Dr. Bierman states that it is his purpose to "tell the practitioner in general and special fields of medicine how he might use physical measures" along with other methods of whatever kind in order to give the greatest possible service to his patients. This is, indeed, a laudable enterprise, but, in spite of excellent illustrations of apparatus, and a good reading text, it is doubtful how much information can be imparted which ought to be used in actual practice. Some of the "modalities" are complicated, even dangerous, and unless one has seen them used and has been able to note whatever changes in the body economy these agencies have brought about, he is in no position to go out and buy equipment and go to work. One needs "to take a course" or courses in this important subject, and this book is a *sine qua non* to that end; for it contains a vast amount of information of proven value. The author well states that "ignorance of the possibilities" of physiotherapy by licensed physicians has left the door wide open to nonmedical persons, some of whom make a good living treating patients who have left "regular doctors" in disgust. And let it also be said that not all of these unlicensed persons are quacks in the pejorative sense. Some of them are well versed in physics, chemistry and thermodynamics, also in anatomy. Their explanations are often weird and not understandable; therefore, the word "fakir" is speedily applied, but they do bring relief to many "incurables" who swear by their ministrations. There is no good reason why medical colleges should not teach physical medicine, manipulative therapy, electrotherapy, the influence of light, heat, etc., to their students. In fact, they must do so now or soon, or "medicine" as a helpful science will go down in public esteem. Books like Dr. Bierman's point the way to high appreciation of "drugless healing". Drugs will always be useful, but they often fail if too much dependence is put upon them. The same can be true of any other method, this "physical" one included.

Physical Therapy

A Manual of Physical Therapy. By RICHARD KOVÁCS, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital, etc. Third edition, thoroughly revised. Illustrated with 118 engravings. Philadelphia: Lea and Febiger, 1944. Pp. 309. Price $3.25.

This new edition embraces wartime needs of civilian, industrial and army problems. It is approached from the viewpoint of internal medicine and the basic sciences. After an introductory chapter on the history and types of treatment there are discussions on heat and light, electricity, water, massage and exercise amply illustrated. The final chapter is devoted to hydrophysical therapy with special attention to the motor and locomotor systems. The effectiveness of these measures in chronic disorders makes it imperative for physicians to become better acquainted with the principles underlying standard forms of physical therapy.

The 1943 Year Book of Physical Therapy. Edited by RICHARD KOVÁCS, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital, etc. Chicago, Ill.: The Year Book Publishers, Inc., 1944. Pp 414. Price $3.00.

This summary of the world literature on physical therapy brings to the fore newer aspects of cold therapy useful in military and industrial surgery as well as in peripheral vascular disease. Fever therapy is shown to be effective in combination with chemotherapy for cases resistant to the latter alone. New forms of exercise designed to increase body fitness are especially valuable for rehabilitation. The Kenny method for early treatment of infantile paralysis has been the stimulus for altering physical treatment. Electric shock therapy of psychosis is correlated with laboratory studies. These are the most striking features of this year's summary. The book is replete with advances made in all branches of physical therapy.

Medical Advances

Recent Advances in Medicine. Clinical, Laboratory, Therapeutic. By G. E. BEAUMONT, F.R.C.P., physician to Middlesex Hospital; Courtauld professor of biochemistry in the University of London, etc. Eleventh edition with forty-three illustrations. Philadelphia: The Blakiston Company, 1943. Pp. 412. Price $5.50.

This new edition by an outstanding clinician and distinguished biochemist, crystallizes the current contributions to experimental medicine. The book is limited entirely to those aspect of the various systems of the body in which chemical progress has been most effective. Consequently the sulfonamides, penicillin and vitamin therapy receive first consideration. Then come evaluations of renal function tests, management of diabetes, hepatic function, treatment of gastric and duodenal ulcers, mechanism of Addison's disease, cardiotherapeutic measures, pulmonary, endocrine and hematopoietic remedies of clinical merit. Each discussion compares the relative value of current literature and evaluates results in terms of everyday practice.

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JUNE 1945

Medicolegal Notes

Proving Second Stage Silicosis

A claimant under the West Virginia workmen's compensation act for compensation benefits on account of silicosis in its second stage is required to show that his capacity for work is or has been actually impaired by such disease. Rejecting the contention of an employer that the use of x ray is insufficient to show the "definite and specific physical signs" of the disease required by the West Virginia statute, the West Virginia Supreme Court of Appeals, in a proceeding where the state silicosis medical board had awarded $1,000 for silicosis in its second stage, holds that the x ray is of great value in medical science and affords a basis for a reasonably definite diagnosis of certain diseases.

Under the West Virginia statute an applicant for silicosis benefits must submit to examination by x ray if required by the silicosis board. The purpose of this is possibly to show "the changes within the lung upon inhalation of minute silica particles". But the statutory requirement relating to impairment of capacity to work will not appear from the x ray examination, unless the physical signs thus shown also show the disease to be so far advanced as clearly to indicate impairment of working capacity. Staples v. State Compensation Commission, 31 S.E. 2nd 433.

Overdose of Nembutal; Whether Resulting Death Was "From Poison" a Question for Jury

Reversing a judgment in the Federal District Court for eastern Missouri on a verdict for the defendant insurance company in an action on the accidental death benefit provisions of life insurance policies and remanding the case for a new trial, the Eighth Circuit Court of Appeals, Feldmann v. Connecticut Mut. Life 142 F. 2d 628, said that the parties agreed that all the policies sued on were New York contracts and that the law of New York controlled. Death "from poisoning" was excluded by the policies.

Insured had died from an overdose of nembutal (pentobarbital sodium) ordinarily taken to produce sleep. Insured had been taking these capsules for years. He usually took a one-half grain capsule, sometimes repeating the dose. On the night he died he had complained of feeling ill and was dead before medical aid arrived. His stomach contained a quantity equal to fifteen of the sleeping capsules, in addition to what had been absorbed into his system and caused his death. Medical experts testified that from ten to thirty grains of nembutal ordinarily would have a fatal effect, although the amount would vary with the susceptibility of the individual and habitual use. Cases where from seventy-five to one hundred and five grains were taken by persons who survived on antidotol treatment were cited. They declared that nembutal was a poison, but their concept was a purely scientific one, which, the Circuit Court said, "would not necessarily be determinative of whether nembutal was a poison within the meaning of the exclusion clause of the policy." What the jury had to determine was something different; whether insured's death was from poisoning within the understanding and use of that term by the average man.

The court decided the case entirely in the light of the prior New York decisions. The trial court in summarizing its charge to the jury, for their benefit, had said: "Did the death result from poisoning? No recovery, whether accidentally or unaccidentally administered." The jury returned to the courtroom with a finding that the insured's death was from poisoning.

From this and other circumstances the appellate court thought the jury had been led to believe that the view of the medical experts was controlling upon it, and so reversed and remanded the case for a new trial.

The court reviewed the New York cases in connection with the insurance company's contention that the trial court should have declared nembutal to be a poison as a matter of law, on the authority of Mansbacher v. Prudential, 273 N.Y. 140, where the courts suggested that morphine was a poison within an insurance policy. It concluded: "But whatever may be the general public concept of morphine as an absolute poison in the State of New York, because of its particular public health laws or for other reasons unknown to us, we do not feel that this single fact either enables or entitles us to declare that ordinary barbiturates necessarily occupy a similar or equally absolute position in the public mind," and that it must hold "that the question whether the insured's death from nembutal in the present case was a death from poisoning was a matter for appraisal by the jury."

DIET PROBLEMS IN GERIATRICS

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TRUTH OF THE MATTER

What We Tend To Forget About Food

T. SWANN HARDING
Falls Church, Va.

Sometimes, in our enthusiasm over the newer knowledge of nutrition with its flossy stuff regarding minerals and vitamins, we tend to forget such old-fashioned food elements as carbohydrates, fats, and proteins. The calorie is no longer so fashionable as it used to be. Up-to-date restaurants are more inclined today to indicate the vitamins and minerals in various foods than their energy ratings.

Scientifically a calorie is the amount of heat required to raise the temperature of one pound or one pint of water four degrees Fahrenheit. But nutritionists use calories to measure the energy value of foods. While energy can be derived from proteins, it should not be, as fats and carbohydrates are better sources.

In the Gay Nineties, W. O. Atwater, father of American nutrition science and long an employee of the Department of Agriculture, with his associates, E. B. Rosa, F. G. Benedict, and others, devised a machine called a calorimeter. It would hold a human being and it made possible accurate measurement of the calories of energy used by the body and supplied by known quantities of various foods.

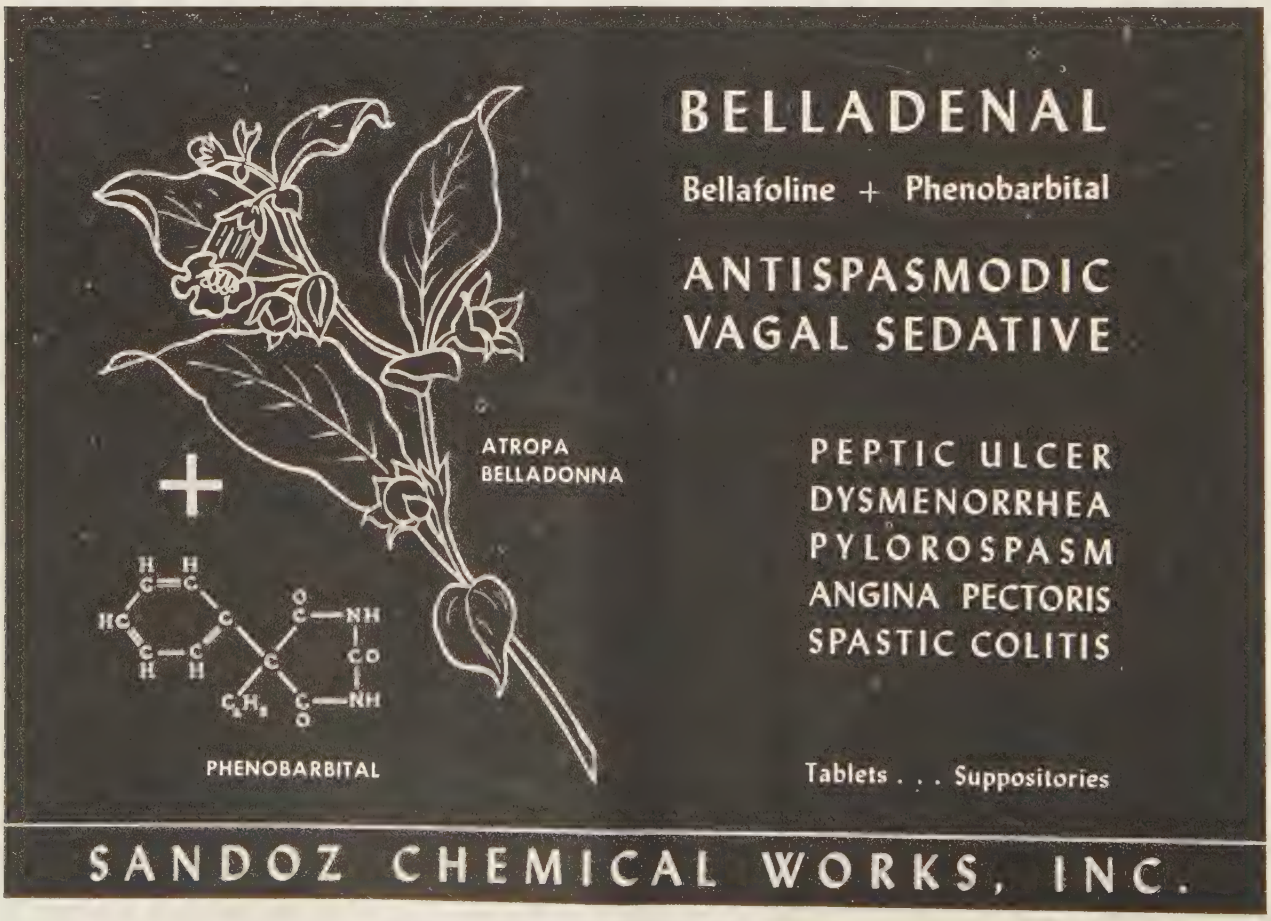
The average-sized man uses only about 100 calories of energy an hour while sitting still. Hence, if he lived in an easy chair, possibly two thousand calories of energy might do him for a day—and that would suit me just fine, in case you ask. But if the man used his large muscles for eight hours a day, which sounds repulsive, that would double his daily calorie requirement.

A moderately active woman needs about twenty-five hundred calories of energy daily, while a very active one—the kind that continually chases you all over the house to see what you have in your pockets—requires three thousand calories. Such women are doubly ruinous as they not only take all your money but also increase their food consumption and make you pay for that in addition.

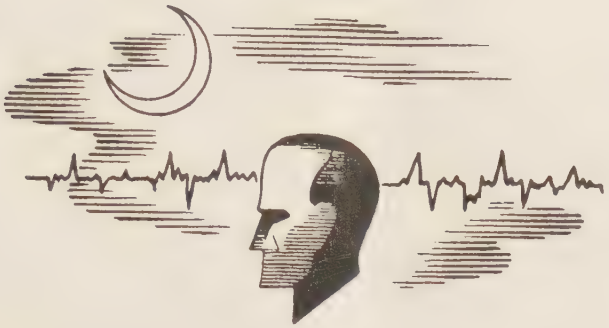
Now, ignoring for the moment the fact that a cocktail may add seventy-five calories to the day's total, as practically no one ever drinks cocktails or highballs these days, let us consider what food can do to the lady who is trying to reduce. It is a rather awesome and alarming thing to consider that a pound of butter provides 3,325 calories, however unlikely milady is to sit down and eat that much butter all at once.

However, did you realize that one good-sized apple provides as many calories as one fair-sized potato? Did you know that a cup of milk provides as much energy as a generous pat of butter? You have to have the milk for calcium and all that, but the calorie content is there. Did you know that one thick slice or two thin slices of bread will fatten you as much as a medium-sized potato?

One might well vaguely remember while eating that a pound of dried apricots provides 1,325 calories, a pound of dried beans 1,590, a pound of Cheddar-type cheese 1,785, or a pound of pork chops 1,060. Of course



SCIENTIFIC STUDY OF SLEEP



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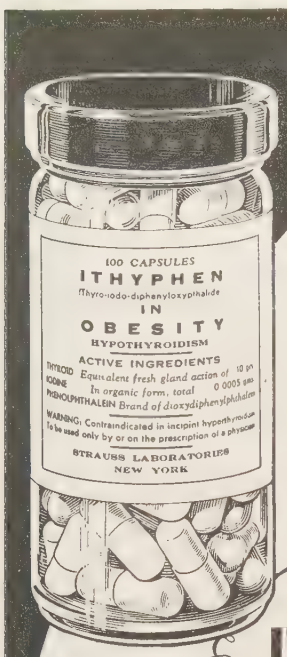


In addition to our own clinical tests, over 15 years of successful use by the medical profession prove that in hypothyroidism, ITHYPHEN is a highly effectual reducing medication without undue toxic by-effects.

Samples and literature on request. Kindly enclose your professional card or letterhead.

Prescribe
ITHYPHEN
***in* OBESITY**
ADVERTISED ONLY TO THE PROFESSION

STRAUSS LABORATORIES
1328 Broadway, New York

a tendency to obesity may run in your family, or it is possible, though none too probable, that your glands have something to do with your getting fat.

But Dr. Henry C. Sherman says, in a recent Department of Agriculture bulletin on the Principles of Nutrition and the Nutritive Value of Food, "It is also true that too much fat in the body must inevitably mean that there has been too high a food-calorie intake for that person's rate of expenditure of energy. Conversely, an undue thinness means that the food-calorie intake has been unduly low."

If it is your desire to combat or prevent obesity, you can either count calories, a rather dismal hobby, or else watch your body weight. If you do the latter, then simply go ahead and eat just as liberally as you can while maintaining the desired body weight.

Generally speaking, the average weight for a given height tends to increase till middle age. The most advantageous degree of fatness is that which corresponds to the average at the age of thirty, i.e., around 125 pounds for a woman five feet, two to three inches tall. Below thirty people generally tend to be underweight and usually have to build themselves up. As they enter middle age, however, the big problems are equatorial expansion, abdominal droop, callipygian inflation, and whether or not to risk another cocktail or piece of candy.

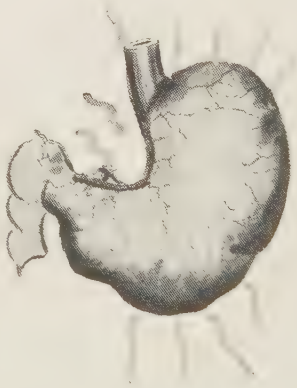
For the moment, of course, fats should not worry us especially as our supply in 1945 will probably be lower than it has been for a long time. However, carbohydrates are with us in abundance and a highly cerealized diet can help the eater lay on fat. This should be kept in mind.

Granite Gables

CHRONIC GASTRITIS

This catarrhal inflammation of the gastric mucosa is associated with deranged digestion, increased mucus formation and changes in the gastric juice. A well-planned diet rich in vitamins is considered to be an important therapeutic measure. In many cases dietary regulation is the most important therapy. In some cases foci of infection must be eliminated.

Medication, however, is often of much value in conjunction with diet therapy, especially if deficiency states are suspected. In these cases gastric enzyme replacement therapy should be tried. Gastron either plain or with Iron may be given by mouth. The latter preparation which presents all the elements of normal gastric juice, plus organic iron, is palatable and well tolerated.



Gastron
REG. U.S. PAT. OFF.

GASTRON is an extract of the organic and inorganic constituents of the entire mucosa of the hog-stomach, including the pylorus. The acidified and aromatized extract is incorporated in an aqueous-glycerin menstruum which preserves the enzymatic activity. Contains no alcohol. Accurately standardized by assay. Gastron is more potent in peptic activity than normal gastric juice.

GASTRON is indicated as replacement therapy in atrophic gastritis and as adjunctive treatment in the anemias and in certain gastric deficiencies of convalescence and old age.

GASTRON is available for prescription use in two convenient forms:

GASTRON (Plain) in 6 and 32 oz. bottles.

GASTRON with Iron in 6 and 32 oz. bottles at all drug stores.

Originated and made by **FAIRCHILD BROTHERS AND FOSTER**
70-76 Laight Street New York 13, N. Y.

The Fountain of YOUTH

At the age of 53, Ponce de León probably felt older than his years when he sought the "fountain of youth" in Florida. The leading infirmity of middle age, hypertension, may have driven him to seek the fabulous curative waters. Its symptoms, such as headache, tinnitus and dizziness, often heralded the twilight of life in his times.

Today, with HEPVISC available, the physician deals *quantitatively* with hypertension. He knows HEPVISC's prompt vasodilatation usually reduces blood pressure 20 to 30 mm. in 4 hours. He also knows HEPVISC has relieved symptoms in 80% of cases.

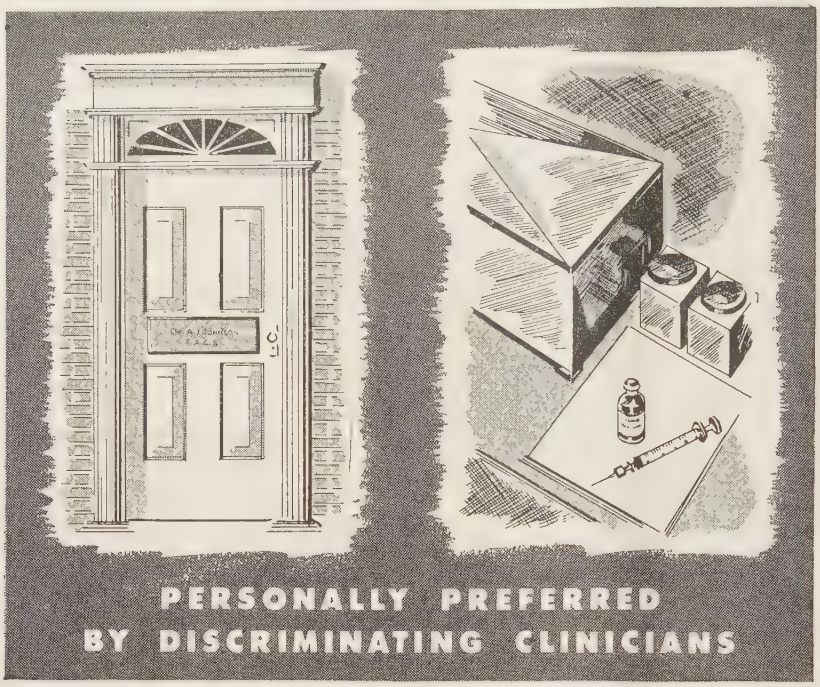
HEPVISC's effectiveness does not lessen on prolonged use. Benefits often continue for a period after withdrawal. HEPVISC should always be tried in theobromine-fast cases.

Each HEPVISC tablet contains 50 mg. Viscum album ext. and 60 mg. each of desiccated hepatic and pancreatic substances. *Dosage:* 1 to 2 tablets ½ hour before meals. Courses last 2 to 3 weeks, with 1 week's interval between. For older patients courses last 3 to 4 weeks. Available in bottles of 50, 500 and 1000 coated tablets.

Write today for a liberal trial supply

HEPVISC
IN HYPERTENSION

ANGLO-FRENCH *Laboratories, Inc.* 75 Varick St., New York 13, N. Y.



Absolute assurance of sterility and uniform potency —plus early availability of the NEWEST in injectible formulae, are the major reasons for the prestige and wide acceptance enjoyed by this group of pharmaceutical specialties of true professional character.

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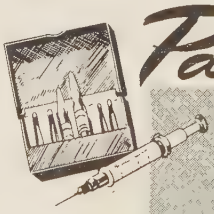
VITAMINS
SPECIALTIES



Parenterals
Dartell
LABORATORIES
LOS ANGELES 15 • CALIF.

Increase in Stature of American Men

Stature shows distinct signs of increase in the present generation, says the *Statistical Bulletin* of the Metropolitan Life Insurance Company. The average height of men twenty to twenty-nine years of age, examined at induction stations for the armed service in May 1943, was 68.15 inches, which is about two-thirds of an inch more than the average of 67.49 inches for the first million draftees of ages twenty-one to thirty examined at mobilization camps in the first World War. Not only has the average height increased over this period, but the proportion of tall men among the 1943 selectees was also greater than among those of the last war. In the age group twenty to thirty years, the proportion of men five feet ten inches or over among the recent selectees was 27.5 percent, as against 22.4 percent reported for the men in 1917.

An examination of the facts for men of different ages at the induction examinations for the present war shows that the older men are of somewhat lesser stature than the younger, and there is a sustained gradual increase from the older to the younger men, except as regards the youngest group, for whom growth is evidently not quite complete. The increasing frequency of taller men is also shown in the separate age groups. At ages twenty to twenty-four there were 28.1 percent five feet ten inches or over. Six-footers comprised 9.1 percent of the men between twenty and twenty-four as compared with only 5.8 percent of those thirty-five or over. Even at ages under twenty, the proportion of tall men was slightly greater than at ages thirty to thirty-four and appreciably greater than among those over thirty-five.

YOUR ELDERLY PATIENTS

Will Thank You, Doctor

When the aging process interferes with appetite, nutrition is often inadequate. GRAY'S COMPOUND, a "bitter tonic," helps to improve appetite, digestion and assimilation and thus aids in bringing about better nutrition. GRAY'S COMPOUND goes hand in hand with the special therapy, which your aged patients may require.

GRAY'S COMPOUND

is a palatable preparation of Extracts of Gentian and Dandelion, Wine, Glycerine, Phosphoric Acid, Tr. Cardamom Comp. and aromatic elixir syrup. Indicated in treating CONVALESCENTS, the RUN-DOWN, LISTLESS CHILDREN, and the OVERWORKED.

The PURDUE FREDERICK CO.
135 Christopher St. New York 14, N.Y.

24-HOUR GUARD DUTY

over your hypertensive patients

ETERNAL VIGILANCE is the price of freedom—from the torments of hypertension's symptoms. The benign form of essential hypertension is the most common and should be looked for particularly in patients in their late forties, and in those whose families have a predisposition to this disease.

The elevated blood pressure is often preceded by a period of increased tonicity of the blood vessel muscles, which respond to stimuli that would not harm a normal person. Some patients whose readings are seemingly normal under basal conditions may have swings upward under various conditions which, if allowed to continue, are indicative of early hypertension.

Timely intervention will usually check the persistence and progression of this dangerous disease, warding off serious complications and enabling the patient to lead a happy, useful life.

Therapies for essential hypertension have been many and explanations of etiologic factors legion. One constant abnormal factor, however, has been observed and that is excessive narrowing of the arterioles. Effective vasodilatation is therefore indicated as a palliative. If consistently and safely carried out, it will keep both systolic and diastolic blood pres-

ALLIMIN has been widely accepted by the medical profession as a safe hypotensive for long-continued use. It gradually and effectively lowers the blood pressure, without any of the unpleasant effects of the nitrites, such as mental confusion, headaches, flushing of the face, and without the important deterrent of depressed gastro-intestinal motility, which often accompanies the use of barbiturates.

COMPOSITION: ALLIMIN Tablets are enteric coated, tasteless and odorless. Each tablet contains 4.75 gr. dehydrated garlic concentrate and 2.37 gr. dehydrated parsley concentrate. The minimal dose is 2 tablets with water, t.i.d., after meals. Intermittent courses of administration, skipping every fourth day, recommended.

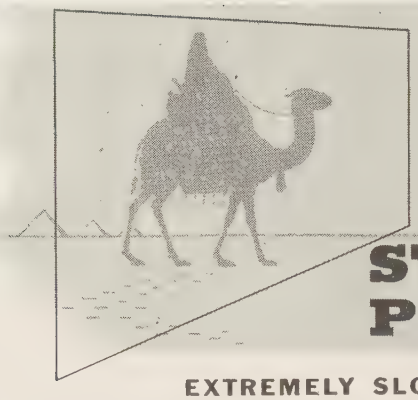
Available in boxes of 60 and 250 tablets, ALLIMIN is advertised exclusively to the medical profession. For professional sample and covering literature, sign and mail the coupon.

VAN PATTEN PHARMACEUTICAL CO.
500 N. Dearborn St., Chicago 10 **MR6**

Please send professional sample of ALLIMIN and covering literature.

Dr._____

Address _____



STAYING POWER

EXTREMELY SLOW ABSORPTION
AFFORDS PROLONGED LOCAL ANALGESIA

A vasoconstrictor is added to most local anesthetics, first — to prevent rapid absorption, and second — to intensify their action.

With Eucupin, however, no such supportive adjunct is required, for Eucupin remains fixed for hours and even days at the site of application; it combines with the protoplasm of the terminal nerve filaments, breaking down slowly enough to afford the otherwise painful area a prolonged period of intense anesthesia and gratifying analgesia.

Thus, when certain procedures and conditions are known to incur long periods of pain, it is obviously futile to attempt to provide enduring control of pain with the common anesthetics. For enduring control, Eucupin is formulated, ready for use, as follows:

Eucupin with Procaine Solution — for surgical anesthesia by infiltration — 30 cc. vials.

Eucupin Solution in Oil — for proctologic anesthesia by infiltration and conservative treatment of low-back pain — 5 cc. ampules, boxes of 6.

Eucupin Ointment — for topical application to the skin and mucocutaneous junctions — 1 oz. tubes and 1 lb. jars.

Eucupin Suppositories — for analgesia in anorectal disorders — boxes of 12 (2 x 6).

EUCUPIN

Local anesthetic-analgesic with "staying power"

Literature and samples on request

RARE CHEMICALS, INC., HARRISON, NEW JERSEY

"Eucupin"—T. M. Reg. U. S. Pat. Off.

Educational Opportunities for Army Doctors

Since the start of World War II, over six thousand selected medical officers have been graduated from short but intensive courses given by the Medical Department in some thirty critical medical and surgical specialties, according to Major General George F. Lull, Deputy Surgeon General. In addition, refresher courses in general medicine and surgery provide medical officers with a chance to "brush up" before returning to professional assignments after other duty. Many doctors also benefit while in service from working under key professional personnel in military hospitals. Other medical officers who have been on duty with combat troops in the field are given an opportunity to brush up on their specialty through the rotation policy.

General Lull reported that 350 doctors had been reassigned from field to hospital duty during the past year in the Mediterranean Theater and intra-theater rotational plans were being encouraged in order that the maximum number of doctors might receive refresher training while they are still in military service. Naturally, professional training of medical corps officers during military service must be restricted to meet military rather than civilian requirements, but "insofar as is possible" opportunities will be provided for professional training. In the post war period, Dr. Lull added, all doctors will be entitled to professional training, after their release from service, under the G.I. Bill of Rights, and those who remain in the Army will have the opportunity for refresher training at selected military hospitals and civilian schools.

DEFINITE TREATMENT
FIXED CHARGES
MINIMUM
HOSPITALIZATION

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AUTHORITATIVE
INFORMATION
AND HOSPITAL
LITERATURE
ON REQUEST

THE CHAS. B. TOWNS HOSPITAL

43 SUCCESSFUL YEARS

TREATING DRUG AND ALCOHOL CASES

EXCLUSIVELY

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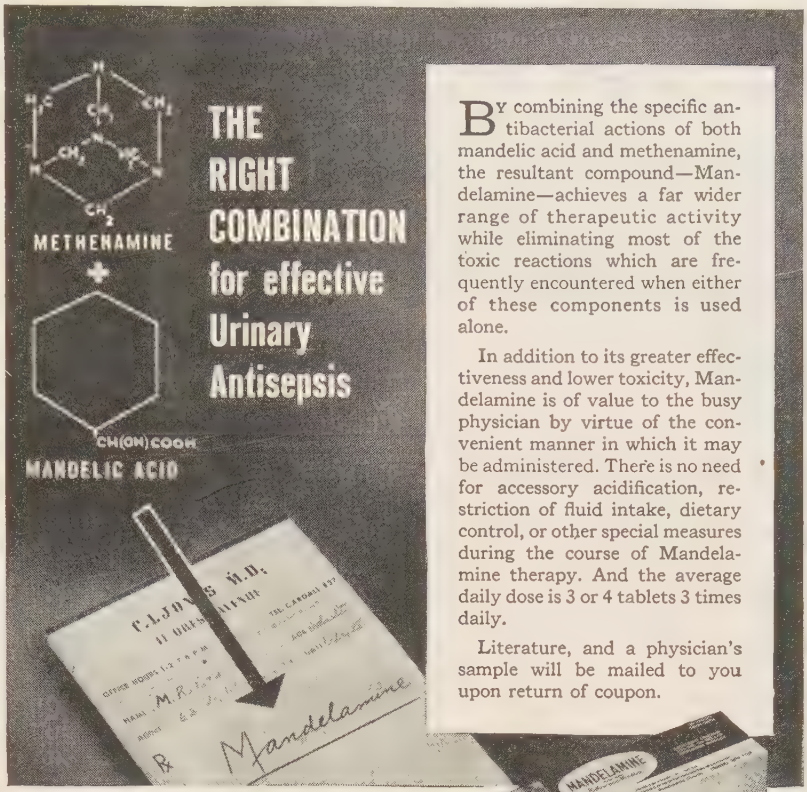
293 Central Park West (at 89 St.), New York 24, N.Y.
SChuyler 4-0770

Rheumatic Fever in Children

Child mortality during the acute phase of rheumatic fever is high, but once this phase is passed the death rate falls sharply. This is the conclusion reached from the experience of the Metropolitan Life Insurance Company, published in the *Statistical Bulletin* (Nov. 1943). The first year following the acute attack is particularly dangerous, especially when the heart is involved. Subacute bacterial endocarditis is much more common in these cases, with children ten years and over the principal victims. Infectious diseases are a serious danger, since fresh attacks of rheumatic fever are frequently preceded by upper respiratory infections, and a lowered resistance to infectious diseases generally is noted in these patients.

Rheumatic fever in childhood is now the leading cause of disability and death at the school ages. The seriousness of the threat warrants an intensive program of prevention and education in lessening the severity of its effects. Such an educational campaign is now under way among physicians, nurses and the general public to promote prevention and to teach ways of early detection. Early diagnosis is a major factor in minimizing permanent and serious heart damage.

Despite the high mortality, the outlook is not invariably bad. Once the active stage requiring complete bed rest is clearly over, many children escape serious damage, and even with some heart impairment are able under proper supervision to lead active and useful lives.



By combining the specific antibacterial actions of both mandelic acid and methenamine, the resultant compound—Mandelamine—achieves a far wider range of therapeutic activity while eliminating most of the toxic reactions which are frequently encountered when either of these components is used alone.

In addition to its greater effectiveness and lower toxicity, Mandelamine is of value to the busy physician by virtue of the convenient manner in which it may be administered. There is no need for accessory acidification, restriction of fluid intake, dietary control, or other special measures during the course of Mandelamine therapy. And the average daily dose is 3 or 4 tablets 3 times daily.

Literature, and a physician's sample will be mailed to you upon return of coupon.

MANDELAMINE

Reg. U. S. Pat. Off. (Methenamine Mandelate)

Mandelamine is supplied in enteric coated tablets of 0.25 Gm. (3¾ grains) each, in packages of 120 tablets sanitaped, and in bottles of 500 and 1000.

NEPERA CHEMICAL CO. INC.
21 Gray Oaks Ave.
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Please send me literature, and a physician's sample of Mandelamine.

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BACTERIOSTATIC DETERGENT

EFFECTIVE MUCOUS SOLVENT

Wherever a mucous detergent is required for regular cleansing of sensitive membranes MU-COL has been found effective, and trustworthy from every viewpoint. It is a balanced saline-alkaline bacteriostatic with special cooling and soothing properties, containing no poisonous or corrosive ingredients. Write for information on clinical experience. Samples, though limited by war, sent on request.

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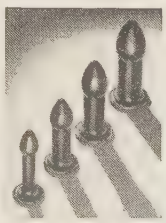
***NEW!* CHILDREN'S SIZE DILATORS**

Anal dilatation, especially in children with an atonic colon in association with a tight or spastic anal sphincter, often produces effective results.

YOUNG'S DILATORS

Are sold on physicians' prescriptions only. Not advertised to the laity. Obtainable from your surgical supply house or ethical drug store. Bakelite, 4 graduated sizes. Children's set $4.50, adult $3.75. Write for brochure.

F. E. YOUNG & COMPANY 432 E. 75th St., Chicago 19, Illinois



When the Patient Needs Rest...

Neuronidia

Elixir of Diethylmalonylurea-Schieffelin

• For the mild or obstinate case of insomnia there is a prompt acting hypnotic which gently leads the way to restful slumber.

• Neuronidia, an elixir of diethylmalonylurea, is readily absorbed and therefore effective in small doses.

• One dessertspoonful of Neuronidia at bedtime usually produces a relaxed sleep that comes promptly upon retiring.

Literature and Sample upon Request

Schieffelin & Co.
Pharmaceutical and Research Laboratories
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Oral Vitamin C Therapy

A new advance in oral vitamin C therapy, embodying a dry, stable, neutral form of sodium ascorbate, gives promise of overcoming many objections to the massive oral use of ascorbic acid. Sodascorbate is the name of the new product, which is exclusively presented by the Van Patten Pharmaceutical Company of Chicago. Sodium ascorbate will receive official recognition in the forthcoming Thirteenth Edition of the *United States Pharmacopeia.*

Large, frequent oral doses of vitamin C have long been noted to produce stomach irritation, gastrointestinal disturbances and diarrhea in sensitive individuals. Patients with gastric hyperacidity or ulcer have been particularly reactive to the acidity introduced by massive doses of ascorbic acid.

Sodium ascorbate, which is free from such disadvantages, has hitherto been used parenterally. A stable, neutral form, suitable for oral use, was not available prior to the introduction of Sodascorbate. Each Sodascorbate tablet contains 120 mg. of sodium ascorbate, equivalent in vitamin C activity to 100 mg. of ascorbic acid. Rigid tests have proved its stability.

Sodascorbate is advocated for use in all indications where vitamin C is employed, with particular emphasis on conditions requiring massive or frequent dosage of vitamin C. Some of the latter are surgical indications, infectious processes, dental indications, pregnancy, lactation and hay fever. Conjoint use of alkalis, as employed with ascorbic acid, may be entirely eliminated with Sodascorbate.

The Van Patten Pharmaceutical Company offers samples and an up-to-date monograph on vitamin C therapy. Address 500 North Dearborn Street, Chicago 10, Ill.

Lynoral, a New Oral Estrogen

Roche-Organon, Inc., of Nutley, New Jersey, manufacturers of endocrine preparations, recently announced to the medical profession a new oral estrogen preparation called Lynoral. Lynoral is ethinyl estradiol, the most effective estrogen for oral administration. It is closely related in chemical structure to alpha-estradiol, the natural follicular hormone, yet does not lose its efficacy when given *per os*. The majority of investigators have evaluated its therapeutic efficacy as at least five to ten times that of stilbestrol. Most patients can take Lynoral with no complaint of undesirable by-effects. Even in those few patients who may develop gastric symptoms, the symptoms usually disappear promptly when the dosage is reduced to its minimal effective level. Lynoral is indicated in the menopause, infantilism, senile and juvenile vaginitis, and other disorders responsive to estrogen therapy. A daily dosage of one to three tablets (0.05 to 0.15 mg) usually elicits an excellent response from the menopausal patient. Recent clinical studies indicate that the experimental use of Lynoral may be of value in the symptomatic treatment of prostatic carcinoma.

Lynoral is available for the physician's prescription in bottles of 30, 60, and 250 scored ablets, each containing 0.05 mg of ethinyl estradiol. Descriptive literature will be furnished upon the request of the physician.

ORETON

FOR THE TAUT, FRAYED NERVES OF

PREMENSTRUAL TENSION

The emotional and physical distress suffered by approximately 40% of women during the five days preceding menstruation often yields dramatically to mild androgenic therapy.[1]

Although the etiological factors involved in premenstrual tension have not been fully established, many reports would seem to indicate that an increased secretion of estrogen by the ovaries during this period may be a responsible factor. Androgens, as antagonists of estrogens, appear to neutralize the effect of this excess secretion and alleviate, if not completely eliminate, the symptoms of the condition.

The androgens of choice for therapy in premenstrual tension are ORETON Ampules for intramuscular injection and ORETON-M Tablets for oral administration.

ORETON

1. Freed, S.C.: J.A.M.A. **127**:377 (Feb. 17) 1945.

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VM. NO. E + (Plus)

High potency natural Vitamin E combined with natural Vitamin A and Chlorophyll in a carrier of vegetable oil. A dietary supplement.

Daily Ration provides:

Vitamin A. 125% (5000 Int. Units)
*Vitamin E.....(45 Milligrams)
Chlorophyll Concentrate
(12 Milligrams)

*Natural mixed tocopherols containing 30 Milligrams of alpha-tocopherol Vitamin E activity.

Send for the "VITAMINERALS MANUAL"

VITAMINERALS CO.

3636 BEVERLY BLVD., LOS ANGELES 4, CALIF.

V-E Day Means More Work for Army Medical Department

Major General Norman T. Kirk, Surgeon General, U.S. Army, in an address delivered on V-E Day, said that the ending of hostilities in Europe meant that the doctors, nurses, technicians and other personnel who comprise the Army Medical Department would begin an even bigger job than they had been doing, which meant there was no immediate prospect for the general release of personnel. The Medical Department, he pointed out, not only must continue to care for the sick and wounded but must make immediate preparations for the redeployment of troops to the Pacific area or to the United States.

One of the biggest tasks, he said, would be to give physical examination to some three million five hundred thousand soldiers before they left Europe. In addition, a goal of ninety days had been set in which to evacuate the sick and wounded from the European Theater to this country, and there was also the final matter of redeploying the Medical Department personnel and equipment.

Soldiers whose condition necessitated a medical discharge would be given further treatment and necessary examinations in the United States, he continued, and all soldiers, prior to discharge from the service, would be screened for tuberculosis, syphilis and other diseases, and for possible strains and other physical defects. Thus hospitals in the United States would probably be operating at capacity with a critical need for medical personnel for many months to come. "So far as we are concerned," he concluded, "the emergency is far from being over."

FOR IODINE RESULTS WITHOUT THE USUAL IODINE DISTURBANCES

ORGANIDIN—WAMPOLE

A STABLE PREPARATION OF IODINE

IODINE

ORGANICALLY COMBINED

FOR INTERNAL ADMINISTRATION

Freely miscible with water. Contains no free iodine, no hydriodic acid, no inorganic iodides and no alcohol.

ORGANIDIN is absorbed readily from the gastro-intestinal tract, with less irritation and less toxicity than is produced by elementary iodine. Thus it permits a maximum effect with a minimum iodine dose.

A superior product which may be administered over an extended period of time with little probability of causing gastro-intestinal disturbances or iodism.

SUPPLIED IN 1-OZ. BOTTLES

MADE SOLELY BY

HENRY K. WAMPOLE & CO., INC.

MANUFACTURING PHARMACISTS

PHILADELPHIA 23, PA. U. S. A.

Medical and Surgical Relief

The executive chairman of the Medical and Surgical Relief Committee announced on February 27th that the Committee had been able to help stem the tide of disease in liberated areas of Europe by giving medical supplies to France and Italy. Other territories covered include India, the Middle East, Canada and the United States, bringing the total amount of relief materials donated the past month to $16,037.08.

The supplies most frequently requested by all groups comprise sulfa drugs, vitamins, baby foods, surgical dressings, bandages and cotton. General operating and obstetrical instruments are in great demand. The Medical and Surgical Relief Committee is often able to supply instruments which other agencies cannot, because it deals in used instruments, acquired in greatest part through donations of doctors and dentists, and put into perfect working order by the Committee before being sent out. Volunteer workers who wish to assist in the work of sorting and rebottling drugs, or doing office work, may call at Committee headquarters, 420 Lexington Avenue, New York.

Guatemala is planning to build a new nine hundred bed hospitall for Guatemala City, the capital of the country. When completed the hospital will be the most modern in Central America.

* * *

The Society of Internal Medicine of Buenos Aires will hold its second Internal Congress in October, with physicians of Argentina, Brazil and Chile in attendance. The subject will be "Anti-infectious Chemotherapy in Internal Medicine."

REED & CARNRICK

Parenteral Medicaments

● This is one of the most remarkable offers we have ever made to physicians. It applies to *every* Reed & Carnrick parenteral, *every* package size, *every* unitage. Place an order with your dealer, or direct, for 3 multidose vials, or 3 boxes of ampuls, of the same size and unitage, and you will receive another at no extra cost. For example, purchase 3 20-cc. vials Estrogenic Hormones, R & C, 10,000 I.U. per cc., and receive 1 20-cc. vial of the same unitage without extra cost (4 vials in all).

● Compare *the cost per injection* of Reed & Carnrick parenterals, when purchased this way, with the prices you are now paying. Place an order for R & C ampuls and vials NOW either with your dealer, or direct, and—ECONOMIZE WITH THE BEST!

● The quality, potency, and clinical efficacy of Estrogenic Hormones, R & C, and other R & C parenterals have so impressed themselves on physicians that the steadily increasing demand has resulted in significant manufacturing economies. The low list prices of these meritorious products, and the present remarkable "buy 4—pay for 3" offer, reflects these savings.

ESTROGENIC HORMONES, R & C
THIAMINE HYDROCHLORIDE
CALCIUM GLUCONATE
B_{12} LIVER AND IRON
LIVER INJECTION
AMPACOIDS PROSTATE
AMPACOIDS TESTICLE

DESCRIPTIVE LITERATURE AND PRICE LIST ON REQUEST

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BURNHAM SOLUBLE IODINE

Its uniformity and efficiency make it the product of choice when the oral administration of iodine is indicated.

Send for sample and therapeutic suggestions

Burnham Soluble Iodine Co., Auburndale 66, Boston, Mass.

USE

COLLENE

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Wherever silver is indicated

You and your patients will equally appreciate the cleanliness and effectiveness of Collene, the original clean and stable silver solution—Always ready for use.

Write us for Samples and Literature

COLLENE LABORATORIES, Inc., 77 White Street, New York 13, N. Y.

kalak
REG. U. S. PAT. OFF.

With the coming of the heated season physicians will seek relief for their patients. Fluids of appropriate nature play a major role in such cases. KALAK presents the essential properties of an appropriate fluid: standard formula containing only salts characteristic of the body fluids, non-laxative, insurance against contamination. It is refreshing and delicious when served cool. Obtainable everywhere.

KALAK WATER CO.
OF NEW YORK, Inc.
30 Rockefeller Plaza
New York 20, N.Y.

New Sulfa Combination for Nasal Instillation

William H. Rorer, Inc., Philadelphia pharmaceutical manufacturer, is introducing Sulfamidazole—Ephedrine Suspension, a new preparation for the control of certain secondary invaders associated with the common cold, and to assist in reducing congestion.

The important active component, Sulfamidazole, a product of Rorer research, is a crystalline double salt of sulfanilamide and sulfathiazole. It combines the advantages of these two sulfonamides in a single crystalline compound. Sulfamidazole possesses a solubility of 0.19 percent, more than double that of sulfathiazole, although less than sulfanilamide, at 37° C. Furthermore, Sulfamidazole crystals are of a soft consistency in contrast to the hard crystals of sulfanilamide or sulfathiazole. Thus the possibility of mechanical irritation is lessened.

Each fluidounce of Sulfamidazole—Ephedrine Suspension, "Rorer" contains sulfamidazole "Rorer" two and one-half percent, ephedrine sulfate one-half percent, menthol 0.1 Gm. and distilled water. It is indicated for the control of bacteria susceptible to sufamidazole action and to help alleviate the discomfort attending common colds. The suggested dosage is two or three drops in each nostril, or by spray, three or four times daily. Supplied in one fluidounce and fourteen fluidounce bottles.

Doctor: "Johnnie, you bad boy! Kicking your brother in the stomach."

Johnnie: "It was his own fault, doc. He turned around."

"INTERPINES"
GOSHEN, N. Y.
Phone 117

ETHICAL—RELIABLE—SCIENTIFIC

Disorders of the Nervous System

BEAUTIFUL—QUIET—HOMELIKE—WRITE FOR BOOKLET

Frederick W. Seward, M.D., Director Frederick T. Seward, M.D., Resident Physician Clarence A. Potter, M.D., Resident Physician

in whooping cough

ELIXIR BROMAURATE

GIVES EXCELLENT RESULTS

Cuts short the period of illness and relieves the distressing spasmodic cough. Also valuable in other Persistent Coughs and in Bronchitis and Bronchial Asthma.

In four-ounce original bottles. A teaspoonful every 3 to 4 hours.

Recommended in Medical Literature.

GOLD PHARMACAL CO. NEW YORK CITY

DDT Studied for Outdoor Use

Extensive investigations are now being conducted to determine the benefits and possible hazards involved in the contemplated use of the insecticide DDT on a large scale outdoors as a part of a plan to control insect-borne diseases, according to a release from the Surgeon General's Office. In the Pacific Theater, DDT proved highly valuable in bringing insect-borne disease under control. However DDT will not be employed indiscriminately in this country until more research work has been completed on the general biological effects of this insecticide.

Besides killing insects that carry diseases, DDT may kill other insects that are beneficial—and thus affect the balance of nature which is important to agriculture and wild life. In combat zones, where the health of the soldier was at stake, it was necessary to ignore these considerations but in the United States general outdoor applications will not be adopted until more is known about these biological effects.

"Libejex"

Libejex, a new product of The National Drug Company, containing liver and five components of vitamin B complex, has been announced by The National Drug Company, Philadelphia, manufacturers of biologicals, biochemicals and pharmaceuticals.

The outstanding feature of Libejex is the combination of liver with the five known B complex vitamins. It is understood that there are many known and unknown factors of the vitamin B complex not available synthetically, but present in their natural form in liver, which may well possess definite and specific clinical value. Another outstanding feature is the absence of pain following injection. Usually the injection of riboflavin causes considerable pain, but the addition of procaine hydrochloride (0.5 percent) in Libejex eliminates pain usually associated with the parenteral injection of riboflavin.

Libejex is supplied in 10 cc. ampoule vials.

Doctor: "I want to change the death certificate I gave you yesterday."

Coroner: "What's wrong?"

Doctor: "I signed my name in the space marked, 'cause of death'."

EFFECTIVE THERAPY
IN
Otitis Media
Requires Analgesia-Bacteriostasis, and Dehydration of the Tissues.
Auralgan
The Doho Chemical Corp., New York-Montreal-London

A "Helping Hand"
THROUGH
TRYING DAYS

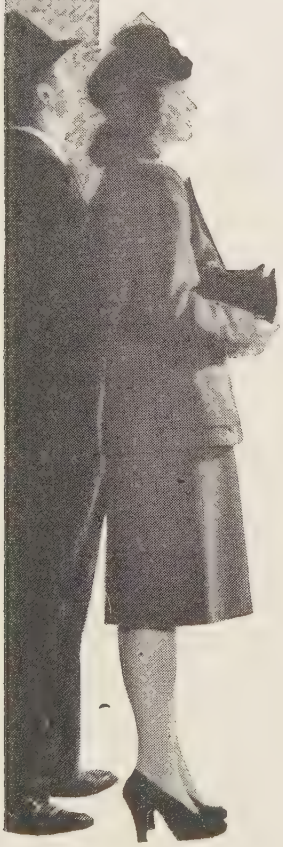
The dependable benefits of HYPEROL in helping to control certain periodic functional utero-ovarian irregularities are especially useful during these days of stress. HYPEROL aids in relieving pain, reducing congestion, and improving general well being where hematinic effects are required, enabling most women to engage in their normal activities.

HYPEROL
IN UTERO-OVARIAN IRREGULARITIES

contains Hydrastine Alkaloid, Aloin, Apiol, and Ferrous Carbonate (Blaud).

The
PURDUE FREDERICK
COMPANY
Makers also of Gray's Compound
135 Christopher Street
New York 14, N.Y.

To those who wonder why we need still bigger War Loans



IN THE 7th War Loan, you're being asked to lend 7 billion dollars—4 billion in E Bonds alone.

That's the biggest quota for individuals to date.

Maybe you've wondered why, when we've apparently got the Nazis pretty well cleaned up, Uncle Sam asks you to lend more money than ever before.

If you have, here are some of the answers:

This war isn't getting any cheaper

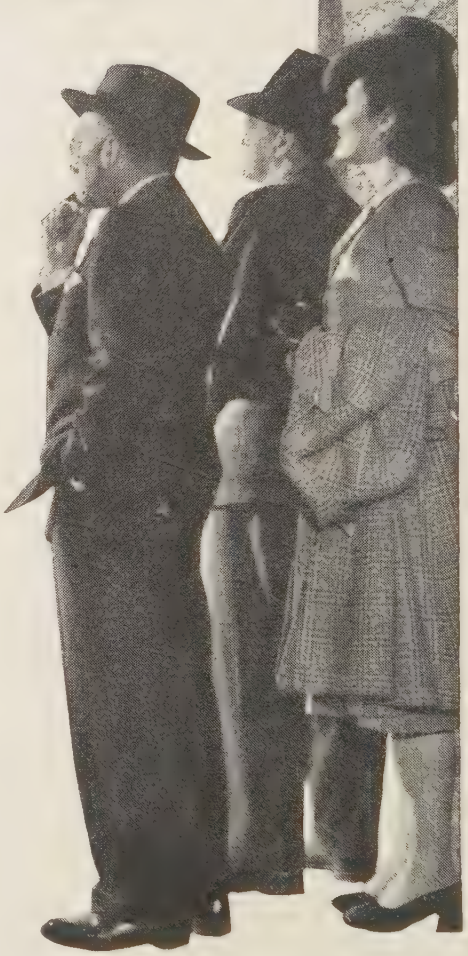
No matter what happens to Germany—or when—the cost of the war won't decrease this year.

We're building up a whole new air force—with new jet-propelled planes and bigger bombers. We're now building—even with announced reductions—enough new ships to make a fair-sized navy. We're moving a whole war half around the world. We're caring for wounded who are arriving home at the rate of one a minute.

Furthermore, there will be only 2 War Loans this year—instead of the 3 we had in 1944.

Each of us, therefore, must lend as much in two chunks this year as we did last year in three. That's another reason why your quota in the 7th is bigger than before.

The 7th War Loan is a challenge to every American. The goal for individuals is the highest for any war loan to date. The same goes for the E Bond goal. Find your personal quota—and make it!



ALL OUT FOR THE MIGHTY 7th WAR LOAN

MEDICAL RECORD

This is an official U.S. Treasury advertisement—prepared under auspices of Treasury Department and War Advertising Council

Tuberculin Test in Pregnancy

The duty of the obstetrician is clear, says Park J. White (*Jour. Missouri State Med. Ass'n.*, March 1943). Obviously he must discover, or if necessary, have an internist discover, any communicable, active tuberculosis in his pregnant patient. If he knows such active infection to exist, he must isolate the baby from the mother immediately after delivery. Whether or not interruption of the pregnancy is indicated depends upon the individual case, as does the advisability of avoiding future pregnancies.

The Contact Infection Committee of the Academy of Pediatrics, in November 1942, added tuberculin testing and chest roentgen raying of pregnant women to its program for the eradication of tuberculosis in children. Dr. White pointed out that this did not mean the pediatricians were telling obstetricians what to do, but merely urging them to take similar action.

The idea that "a positive tuberculin test in an adult means nothing", Dr. White continued, has long since been abandoned. It means that the chest should be x rayed and, if anything significant is found, the sputum, if obtainable, should be examined for tubercle bacilli. Such a procedure is not only of great importance to the pregnant woman, but also to her newborn baby.

Objection may properly be raised that a strongly positive intradermal tuberculin test (perhaps five to ten percent more accurate than the Patch test) could light up a quiescent process and result in harm to both mother and child. Where this is feared, the Patch test should be performed.

"Pure Water Like Pure Air Is Vital To Health"

GREAT BEAR

IDEAL SPRING WATER

ELECTRIC WATER COOLERS AT
SMALL MONTHLY RENTALS

•

ALSO ENJOY WHOLESOME
GREAT BEAR BEVERAGES
Ginger Ale—Club Soda—Root Beer

•

GREAT BEAR SPRING COMPANY
New York—Brooklyn—Albany—Buffalo
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Consult Your Telephone Directory
For Office Nearest You.

Free Home or Office Delivery in Above Areas.

Through The Menstrual Years of Life-

THE frequency with which the menstrual life of so many women is marred by functional aberrations that pass the borderline of physiologic limits, emphasizes the importance of an effective tonic and regulator in the practicing physician's armamentarium.

In Ergoapiol (Smith), the action of *all* the alkaloids of ergot (prepared by hydro-alcoholic extraction) is synergetically enhanced by the presence of apiol, oil of savin, and aloin. Its sustained tonic action on the uterus provides welcome relief by helping to induce local hyperemia, stimulate smooth, rhythmic uterine contractions, and serve as a potent hemostatic agent to control excessive bleeding.

May we send you a copy of the comprehensive booklet "The Symptomatic Treatment of Menstrual Irregularities."

MARTIN H. SMITH COMPANY
150 LAFAYETTE STREET, NEW YORK

INDICATIONS
Amenorrhea, dysmenorrhea, menorrhagia, metrorrhagia, in obstetrics.

DOSAGE
1-2 cap. 3-4 times daily.

SUPPLIED
In ethical pkgs. of 20 cap.

ERGOAPIOL

••THE PREFERRED UTERINE TONIC••

National Drug Expands Research Staff

Following out the expanded research program which was announced sometime ago by The National Drug Company, several new members have been added to the Research Department: Dr. L. J. Lewis, who has been associated with Sharp & Dohme and is a graduate of the University of Pittsburgh; Dr. J. C. Eck, who has been affiliated with the U.S. Industrial Chemical Corporation of Stamford, Conn., and who received his Ph.D. degree from the University of Illinois; Dr. Souren Avakian, who has been working on an O.S.R.D. contract on antimalarials for the past two years and who received his training at Iowa State; Dr. Harold Urist, who has been affiliated with National Oil Products Corporation and who took graduate training at the University of Michigan and the University of Minnesota; Dr. Morton Beiler, who is a graduate of Fordham University and Miss Hope Hastorf, who has been with E. R. Squibb & Sons, Calco Chemical Corporation and Columbia University.

Dr. G. J. Martin, Research Director of The National Drug Company, states that with the addition of this group of research workers, the expanded program for The National Drug Company will get under way.

A doctor telephoned the hospital about his patient and was answered by a student nurse.

"Has my patient had any hallucinations?" the doctor inquired.

"I don't know for certain," replied the nurse, "but she surely had them if you ordered them."

DR. BARNES SANITARIUM

STAMFORD, CONNECTICUT

For treatment of Nervous and Mental Disorders, Alcoholism and Convalescents. Carefully supervised Occupational Therapy. Facilities for Shock Therapy. Accessible location in tranquil, beautiful hill country. Separate buildings.

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SISTER KENNY'S New Book on INFANTILE PARALYSIS

In collaboration with Dr. Jno. F. Pole (Univ. Minn.) Endorsed by the Nat. Foundation for Infantile Paralysis and many leading orthopedists. *Only authoritative work on the Kenny method. Illustrated.* 368 *pages.* $5.00.

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SEX SATISFACTION AND HAPPY MARRIAGE, by Rev. Alfred Tyrer. An excellent book for your patients contemplating marriage. $2.00.

SEX IN MARRIAGE, by Ernest R. and Gladys H. Groves. A safe guide in Marital relations for both sex. $2.00.

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SEXUAL PATHOLOGY, by Magnus Hirschfield, M.D. $3.00.

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PRACTICAL MALARIAL CONTROL, a handbook for field workers. By Carl E. Gunther, M.D. $3 50.

MINOR SURGERY, a classical text book, comprising 18 chapters, by 18 editors of known ability. Especially valuable to those in service. $5.00.

THE EXAMINATION OF REFLEXES, by Robert Wartenberg, M.D. (New) Tells how to evaluate all the diagnostic reflexes, including many new ones, and how to avoid errors, illustrated. $2.50.

ART OF ANESTHESIA (New) by Paluel I. Flagg, M.D. Valuable for Student and Expert. Features all the new drugs and technique. $6.00.

We supply any book or magazine.

TIMELY NEW BOOKS

SULFONAMIDE THERAPY IN MEDICAL PRACTICE (New), *by F. D. Smith, M.D.* Exact dosage and toxic reactions of all the Sulfos and Penicillin. Illustrated. $5.00.

PICTORIAL HAND BOOK OF FRACTURE TREATMENT (New), *by Edw. L. Compere.* Most practical work on fractures in a decade; the latest methods illustrated and described; technic of skeletal traction and fixation. $4.25.

UROLOGY IN GENERAL PRACTICE, by *Ockerblad* and *Carlson* (Univ. Kas.). A mentor for practitioners who now must be able to handle the ordinary run of G-U cases; $4.00.

BED MANNERS, (New) Bed-iquette for the married. An intimate and confidential resume of bed-going and bed-doings; humorous and instructive. Illustrated. $2.00.

ENDOSCOPIC PROSTATIC SURGERY, *by Roger W. Barnes.* First illustrated technic of Transurethral method. $6.00.

NERVOUSNESS, INDIGESTION AND PAIN, *by Walter C. Alvarez.* A practical book for every day. $5.00.

THE URINARY TRACT, *by Kerr* and *Gillies.* A new Diagnostic X-Ray Atlas, with 120 full-page plates, a classic in expert film reading. 168 diseases are diagnosed. $5.50.

BIRTH CONTROL. Explains Ogino-Knaus technic. No mechanical or antiseptic interference. $2.00 postpaid, including timing chart.

ACUTE MEDICAL DISORDERS—Diagnosis and Treatment. (New) *Francis D. Murphy.* Illustrated. $6.00. Send for complete list of subjects.

MULLEN'S HAND BOOK OF TREATMENT arranged in alphabetical order for quick answers, 2000 formulae. $4.50.

WAR MEDICINE

A new book, covering all phases of *War Surgery, Aviation, Psychiatry,* and *Medicine,* by 50 experts. No work like it. Price $7.50.

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The author's experience of thirty years practice. The fundamentals and physics of electricity thoroughly explained. New chapters on Short Wave and Hyperpyrexia. Price, $3.50, including Grover's unique book on Blood Pressure, with diagnostic chart.

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A startling insight to Der Fuehrer's intimate life with details of the prolonged psychoanalytic treatments given this degenerate character by Dr. Kurt Krueger. $2.00.

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By J. E. G. Waddington, M.D., based upon 25 years experience as practitioner, author and teacher.

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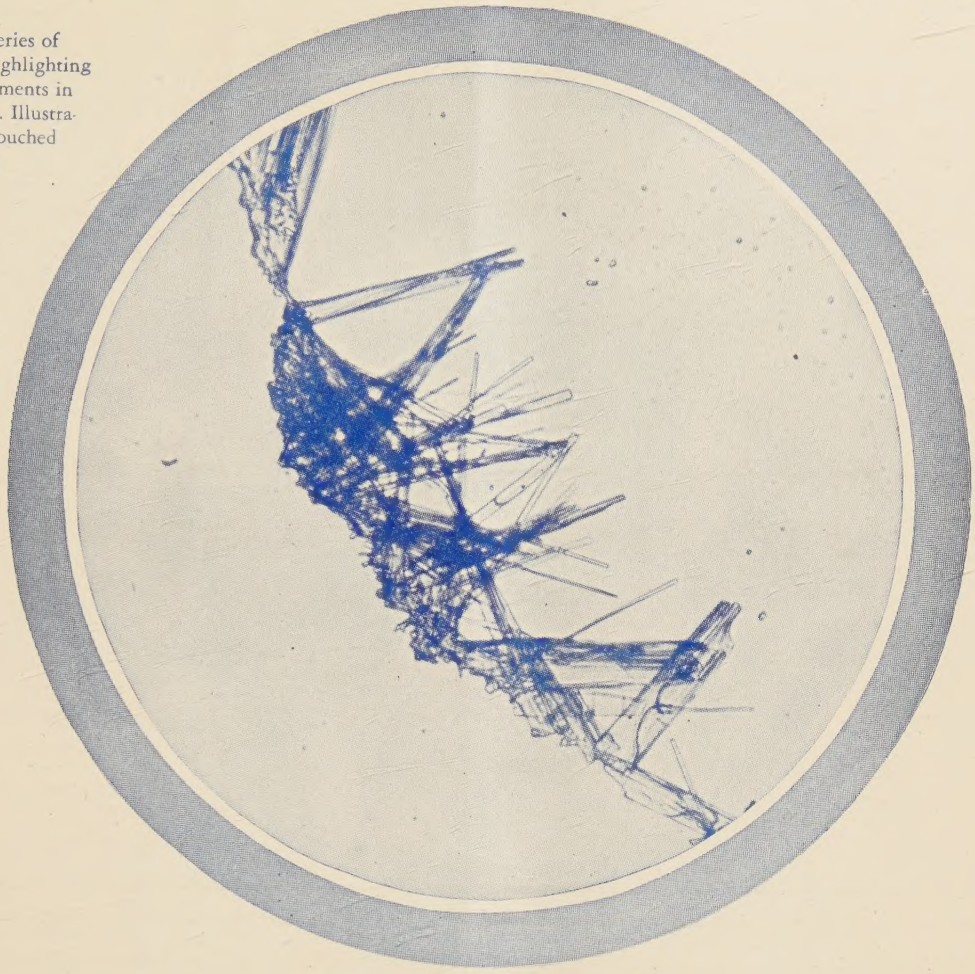
GREAT TRIUMPHS IN VITAMIN RESEARCH

This is one of a series of historical notes, highlighting important achievements in Vitamin Research. Illustration is from unretouched photo-micrograph taken in 1944.



☆ 1933...RIBOFLAVIN ISOLATED AND IDENTIFIED ☆

AS FAR BACK as 1919, there were definite clues leading nutritional research scientists to suspect that the growth-promoting factor in vitamin B might be a separate and distinct nutritional element from the antineuritic factor. Exhaustive experimentation on laboratory animals through the intervening years produced more conclusive evidence and confirmed the fact. It was not until 1933, however, that this element was finally isolated in pure crystalline form at the University of Heidelberg—.06 of a gram from 750 gallons of milk. It is identified as riboflavin—more commonly known as vitamin G (or B_2). Beyond its growth-promoting function, riboflavin is a specific for some forms of cheilosis and corneal opacities.

Two VI-TEENS Super Potency vitamin tablets daily, supply 4 milligrams of riboflavin, or 200% of the minimum adult requirement. The potency of this and all other ingredients is carefully guarded by scientific control in the modern laboratory where VI-TEENS are formulated.

VI-TEENS Super Potency vitamin tablets are especially recommended in cases of avitaminosis where an unusually high dosage of additional multiple vitamin intake, particularly with reference to thiamin, riboflavin, and pyridoxine, is indicated. Regular size package on request.

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GOOD...
BUT sunbathing may be overdone. When this occurs, NUPERCAINAL* — the non-narcotic, prompt and prolonged-acting anesthetic ointment — is good to painful, burned skin.
NUPERCAINAL
Available in tubes of 1 oz., and jars of 1 lb.
*Trade Mark Reg. U. S. Pat. Off.
"Nupercainal" identifies the product as containing Nupercaine (α-butyloxycinchoninic acid-γ-diethylethylenediamide) 1% in lanolin and petrolatum, an ointment of Ciba's manufacture.
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